

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

SUNOCO PARTNERS MARKETING &)	
TERMINALS L.P.,)	
)	
Plaintiff,)	Case No. 17-1390 (LPS-CJB)
)	
v.)	
)	
POWDER SPRINGS LOGISTICS, LLC, AND)	JURY TRIAL DEMANDED
MAGELLAN MIDSTREAM PARTNERS,)	
L.P.,)	
)	
Defendants.)	

SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Sunoco Partners Marketing & Terminals L.P. (“Plaintiff” or “Sunoco”) files this Second Amended Complaint for Patent Infringement against Defendants Powder Springs Logistics, LLC and Magellan Midstream Partners, L.P. (collectively, “Defendants”), as set forth below:

PARTIES

1. Plaintiff Sunoco Partners Marketing & Terminals L.P. is a limited partnership organized under the laws of the State of Texas, with its principal place of business in the United States located at 3807 W. Chester Pike, Newton Square, Pennsylvania 19073. Plaintiff Sunoco Partners Marketing & Terminals L.P. is the owner, by assignment, of all right, title and interest to U.S. Patent No. 9,494,948; U.S. Patent No. 9,606,548; U.S. Patent No. 9,207,686; U.S. Patent No. 6,679,302; and U.S. Patent No. 7,032,629.

2. On information and belief, Powder Springs Logistics, LLC (“Powder Springs”) is a joint venture that was formed for the purpose of constructing a facility near Atlanta, Georgia that

now has the capacity to blend butane into gasoline product flowing through an interstate pipeline. Powder Springs is a limited liability company organized under the laws of the State of Delaware.

3. On information and belief, Magellan Midstream Partners, L.P. (“Magellan”) is a limited partnership organized under the laws of the State of Delaware, with its principal place of business located in Tulsa, Oklahoma.

NATURE OF THIS ACTION

4. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

JURISDICTION AND VENUE

5. This Court has exclusive subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over Powder Springs because Powder Springs resides in this District. Specifically, Powder Springs is a limited liability company organized under the laws of the State of Delaware.

7. This Court has personal jurisdiction over Magellan because Magellan resides in this District. Specifically, Magellan is a limited partnership organized under the laws of the State of Delaware.

8. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b) because Powder Springs and Magellan reside in this District. Specifically, Powder Springs and Magellan are both organized under the laws of the State of Delaware.

9. Joinder of Defendants in this case is proper under 35 U.S.C. § 299 because (1) certain infringing acts of Defendants arise out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering

for sale, or selling of the same accused product or process, and (2) there exist questions of fact common to all Defendants that will arise in the action.

FACTS COMMON TO EACH CLAIM FOR RELIEF

A. Powder Springs System

10. An interstate pipeline system that traverses across thirteen states is owned, operated, maintained by Colonial Pipeline Company (“Colonial”). This Colonial pipeline system originates in Houston, Texas and terminates in Linden, New Jersey.

11. Colonial does not own the products it transports in its pipeline. Instead, Colonial is a common carrier that is simply the “bailee” of the products it transports on behalf of Sunoco and other third-party shippers. Shippers have used the Colonial pipeline for decades to inject petroleum products into the Colonial pipeline in Houston, Texas, and at certain other points of entry along the pipeline, and to remove the product from the pipeline at various destination points along the pipeline (sometimes called “terminals” or “tank farms”).

12. When the customer receives the product at a terminal or tank farm, the gasoline is typically transferred to large storage tanks for later distribution. The terminal can distribute the gasoline from the storage tank to tanker trucks for final delivery at retail gas stations, or place the gasoline back into the pipeline for further distribution at another terminal.

13. Some terminals along the Colonial pipeline are owned and operated by Colonial itself. For example, Colonial owns and operates a terminal along the Colonial Pipeline called the Atlanta Junction facility in Austell, Georgia. However, other terminals along the Colonial pipeline are owned and operated by various third-party shippers, including Sunoco and Sunoco’s licensees.

14. When Sunoco and Sunoco’s licensees receive their gasoline at terminals, they often blend the gasoline with butane—using Sunoco’s patented technology—before the gasoline is distributed to other locations.

15. Blending butane with gasoline raises the gasoline's volatility, or its ability to combust, and proper gasoline volatility is important to the proper performance of car engines. For example, because gasoline is more difficult to combust in colder temperatures, it is generally desirable to increase the volatility of gasoline in colder months to keep cars performing at a consistent level year-around. Adding butane also reduces the cost for the gasoline provider because butane is generally less expensive than gasoline bought at the wholesale level. Blending butane with gasoline is therefore desirable to a gasoline supplier because doing so increases the overall volume of the gasoline, which reduces the cost of gasoline on a volumetric basis.

16. The Reid vapor pressure ("RVP") is a common measure of and generic term for gasoline volatility. The U.S. Environmental Protection Agency ("EPA"), as well as states across the nation, regulate the maximum allowable RVP of gasoline that will be sold at retail gas stations. These regulations vary by regions, state and locality throughout the year. For example, in some areas, conventional gasoline sold between May 1 and September 15 may not exceed an RVP of 7.8 to 9.0 pounds-per-square-inch ("psi"), but in other months, it may reach as high as 15.0 psi in some states.

17. Gasoline components including butane are first blended at refineries by third-party shippers, before the gasoline is injected into the pipeline and transported to terminals. However, because gasoline pipelines serve multiple regions that have variable RVP requirements, the refinery is limited to modifying the RVP of the gasoline to an amount below the lowest maximum RVP allowed for the regions served by the pipeline, and has to account for other limiting factors such as octane numbers. As such, the gasoline in a pipeline being transported from a refinery to a specific terminal will have a lower RVP than the maximum allowable RVP for the particular state or locality intended to be served by that terminal.

18. Using Sunoco's patented butane blending technology, Sunoco and its licensees blend butane with the gasoline received at their terminals to raise the gasoline's RVP up to the maximum RVP allowable by law for the specific location to be served. This allows Sunoco and its licensees to maximize the amount of butane that they blend with gasoline, and thereby minimize their cost basis for the gasoline sold while also increasing the total volume.

19. On information and belief, Powder Springs is a joint venture between Colonial and Magellan that was formed to construct and develop a butane blending system at the Atlanta Junction facility. **Exhibit 1** at 6, ¶ 26; **Exhibit 2** at 4. Through Powder Springs, Magellan and Colonial have "invested millions of dollars" in the construction of this butane blending system at the Atlanta Junction facility. **Exhibit 1** at 6, ¶ 26 ("Colonial admits that the Joint Venture has invested millions of dollars in the construction of facilities to enable butane injections into the Colonial pipeline in Atlanta, Georgia.").

20. Magellan acted as the construction manager for the blending system, and also acts (or will act) as the operator of the system. **Exhibit 2** at 4 ("We own a 50% interest in Powder Springs Logistics, LLC ('Powder Springs'), which was formed to construct and develop a butane blending system, including 120,000 barrels of butane storage, near Atlanta, Georgia. We served as construction manager and serve as operator of the Powder Springs facility, which we expect to begin operating in first quarter 2017").

21. The newly-installed blending system now enables Defendants to inject butane into the gasoline product, as the gasoline product passes through the Atlanta Junction facility and continues on to the various third-party customers (such as Sunoco and its licensees) at terminals downstream of the Atlanta Junction facility. **Exhibit 1** at 18, ¶ 22 ("Beginning in December 2014,

Colonial, through a subsidiary entity, invested in the Joint Venture, which now has the capacity to inject butane into product flowing through Colonial's pipeline in Atlanta, Georgia.")).

22. For example, on information and belief, the newly-installed blending system will inject butane into various gasoline pipelines passing through the Atlanta Junction facility, such as the "spur pipelines" destined for Knoxville, Bainbridge, Nashville, and Doraville (among others). Upon information and belief, the blending system will also inject butane into the "Line 1 pipeline" as it passes through the Atlanta Junction facility and continues northbound.

23. Upon information and belief, through the newly-created entity Powder Springs, Magellan and Colonial intend to sell the additional volume of gasoline that will be created by its unauthorized use of Sunoco's patented technology to customers of Powder Springs, with the profits accruing solely to the entity Powder Springs. **Exhibit 1** at 2, ¶ 3 ("It is intended that customers of the Joint Venture will purchase and ship to designated destinations on the pipeline such quantities of gasoline as are created as a result of the Joint Venture's butane injections."); at 5-6, ¶ 20 ("Colonial admits that it allows the Joint Venture to inject butane into the pipeline in Atlanta, Georgia which results in the creation of gasoline the Joint Venture sells to customers, with any profit or loss resulting from such sales accruing to the Joint Venture."); **Exhibit 3**.

24. On information and belief, this butane blending system has already been constructed and is already operational for at least testing purposes. **Exhibit 1** at 18, ¶ 22 ("Beginning in December 2014, Colonial, through a subsidiary entity, invested in the Joint Venture, which now has the capacity to inject butane into product flowing through Colonial's pipeline in Atlanta, Georgia.")).

25. As explained below, Defendants' newly-installed butane blending system and butane blending activities infringe one or more claims of Sunoco's butane blending patents.

Defendants' infringement will cause irreparable harm to Sunoco and its licensees, which have been blending butane into gasoline at terminals downstream of the Atlanta Junction facility, because Defendants' unauthorized blending will raise the gasoline RVP to or near the maximum allowable RVP. As a result, Defendants' blending will effectively prevent Sunoco and its licensees from blending butane, at least beyond minimal amounts, drastically diminishing the value of Sunoco's patented butane blending systems downstream and harming Sunoco's ability to further develop its butane blending market along the Colonial pipeline and elsewhere. The infringement will result not just in financial harm at the terminals, but in a loss of market share and market opportunities, as well as a loss of business relationships and harm to Sunoco's reputation with respect to its patented technology, that cannot be adequately accounted for with money damages.

B. Magellan's Blending Systems

26. On information and belief, Magellan owns and operates butane blending systems and performs butane blending methods, including, for example, at the following locations: the East Houston Terminal, located at 7901 Wallisville Road, Houston, TX 77029; the Chattanooga II Terminal, located at 4326 Jersey Pike, Chattanooga, TN 37416; the Greensboro II Terminal, located at 7109 W Market St., Greensboro, NC 27419; the Allen Terminal, 107 S. Camper Road, Allen, OK 74825; the Carthage Terminal, 18195 County Road 138, Carthage, MO 64755; the Kansas City Terminal, Kansas City, KS; the Oklahoma City-Reno Terminal, 251 N. Sunnyslane Road, Oklahoma City, OK 73117; the West Tulsa Terminal, 2120 S. 33rd West Avenue, Tulsa, OK 74107; the Dupont Terminal, Dupont, CO; and all other locations at which Magellan owns or operates reasonably similar butane blending systems (collectively, "Magellan's Blending Systems").

27. For example, the Risk Management Plan (“RMP”) for the East Houston Terminal states: “The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40 CFR 68 regulated substance at this facility is butane. Butane is stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping, storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the system is 9,526,126 lbs of butane.” **Exhibit 10**; *see also* **Exhibit 11** (RMP for Chattanooga II Terminal: “Magellan stores butane onsite for blending into gasoline The equipment which handles butane includes five pressure vessels and associated piping. The pressure vessel and associated piping may contain over 1,463,634 lbs of butane.”); **Exhibit 12** (RMP for Greensboro II Terminal: “Magellan stores butane onsite for blending into gasoline The equipment which handles butane includes five pressure vessels and associated piping. The pressure vessel and associated piping may contain up to 1,463,634 lbs of butane.”).

28. Further, on information and belief, Magellan utilizes automated equipment with its butane blending systems and methods, such as on-line vapor pressure analyzers, on-line vapor-liquid ratio analyzers, programmable logic controllers (“PLCs”), and processors, among other types of equipment.

29. For example, Madeleine McLean, a General Manager of Colonial Terminal Logistics, stated in a declaration filed on November 21, 2017: “In 2012, Colonial decided to construct a butane blending facility at Atlanta Junction to enable in-line butane blending on the Colonial pipeline. . . . I was project leader for the PSL project and dealt directly with both Magellan and Sunoco throughout the proposal process. . . . Part of the process was an evaluation of the respective automated blending capabilities of Magellan and Sunoco.” D.I. 35 at ¶¶ 4, 6, 7.

30. Further, Magellan stores large quantities of butane at its terminals for blending into gasoline, which indicates the presence of automated blending equipment. *See, e.g.*, **Exhibit 10** (9,526,126 lbs. of butane at East Houston Terminal); **Exhibit 11** (1,463,634 lbs. of butane at Chattanooga II Terminal); **Exhibit 12** (1,463,634 lbs. of butane at Greensboro II Terminal).

31. In addition, Magellan posted a job opening for an “Automated Instrument Technician” who would “be located in in Tulsa, OK or Atlanta, GA, with support responsibilities throughout Magellan’s South-East Terminals.” **Exhibit 13**. The responsibilities for this position included:

- Coordinate and perform routine preventive maintenance (PM), repairs, calibrations, and quality control (QC) measures to assure that all automated instruments (including RVP, Sulfur, Karl Fisher Water analyzers and automatic samplers) and blending control systems at Magellan terminals are operating according to the manufacturer’s and the Company’s specifications
- Analyze QC data from RVP analyzers (on-stream and benchtop), sulfur analyzers (on-stream and benchtop), and other similar automated analytical instruments, adjusts, and identifies when repairs and other maintenance is required per Company procedures
- Develop troubleshooting and calibration procedures for automated instrumentation
- Conduct training of field operations personnel related to automated instrumentation and blending control systems
- Monitor, track and evaluate scheduled instrument check data and performance charts for all automated instruments and blending systems which monitor fuel quality

Id.

32. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan has been, and still is, utilizing automated butane blending equipment and systems at its facilities, including blending equipment such as, but not limited to, flow controllers, PLCs,

processors, injection pumps, flow control valves, and online vapor pressure analyzers. *See, e.g.*, MAG-SUN_00003146-3148; MAG-SUN_00003361-3363; MAG-SUN_00010754-11158; Magellan's Resp. to Interrog. No. 1 (July 13, 2018).

33. As explained below, Magellan's Blending Systems and butane blending activities infringe one or more claims of Sunoco's butane blending patents.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 9,494,948
(Defendants' Powder Springs System and Magellan's Blending Systems)

34. Sunoco re-alleges and incorporates herein by reference the allegations in each of the preceding paragraphs as if fully set forth herein.

35. On November 15, 2016, U.S. Patent No. 9,494,948 ("the '948 patent") was duly and legally issued by the U.S. Patent and Trademark Office ("PTO") to Mattingly et al. for an invention relating to "Versatile Systems for Continuous In-Line Blending of Butane and Petroleum." A true and correct copy of the '948 patent is attached hereto as **Exhibit 4**. The '948 patent is presumed valid pursuant to 35 U.S.C. § 282.

36. Mattingly et al. assigned all right, title and interest in the '948 patent to Plaintiff Sunoco Partners Marketing & Terminals L.P.

A. Powder Springs System

37. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Defendants are infringing one or more claims of the '948 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline.

38. **Claim 7, Preamble.** The preamble of claim 7 recites "[a] system for blending butane with gasoline in a pipe to form a blend of butane and gasoline, wherein the gasoline and the blend of gasoline and butane each have a vapor pressure."

39. Defendants have made, used, and/or are using systems for blending butane with gasoline in a pipe to form a blend of butane and gasoline, wherein the gasoline and the blend of gasoline and butane each have a vapor pressure, at the Atlanta Junction facility.

40. For example, in Colonial's Answer and Affirmative Defenses in the litigation *George E. Warren Corporation v. Colonial Pipeline Company*, No. 2:17-cv-01205-KM-JBC (D.N.J. July 31, 2017), ECF No. 24 ("*GEW* litigation"), Colonial admitted that "Powder Springs Logistics LLC is a Joint Venture that has constructed a facility in Georgia to enable in-line blending of butane into gasoline flowing through Colonial's pipeline. It is intended that customers of the Joint Venture will purchase and ship to designated destinations on the pipeline such quantities of gasoline as are created as a result of the Joint Venture's butane injections. Colonial admits that affiliates of Colonial and of Magellan Midstream Partners, LLP participate in the Joint Venture." **Exhibit 1** at 2, ¶ 3.

41. In addition, in Magellan's Special Land Use Permit application ("SLUP application"), Magellan stated that "the facility will provide butane blending capabilities that effectively increase the supply of gasoline distributed from Colonial's pipeline that is distributed along the east coast. The new facility will be used to blend a small percentage of butane into gasoline which will meet all federal, state and industry specifications and can be used in all vehicles with spark ignition engines." **Exhibit 5** at 4.

42. Accordingly, Defendants' butane blending systems satisfy the preamble of claim 7.

43. **Claim 7, Limitation (a)**. Claim 7 further recites "a butane reservoir in fluid connection with said gasoline."

44. Defendants' butane blending systems include a butane reservoir in fluid connection with the gasoline.

45. For example, in its SLUP application, Magellan stated that “[t]he Injection System will be supplied from the Storage System which consists of two (2) 60,000 bbl (working volume) spheres and eight (8) vertical can pumps.” **Exhibit 5** at 12.

46. In addition, RMP for the Powder Springs facility states that “Powder Springs Logistics is [a] butane storage and blending terminal which stores butane and blends into refined products pipelines. . . . The equipment which handles butane includes two pressure vessels, ten injection pumps and associated piping. The butane pressure vessel and associated piping may contain as much as 27,821,556 lbs of butane.” **Exhibit 6**.

47. Further, U.S. Patent No. 9,080,111 to Magellan (“the Magellan patent”) provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: one or more, preferably a plurality of, butane bullet tanks 6 or other pressurized butane storage vessels; one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10” **Exhibit 7** at 8:25-45.

48. On information and belief, the butane reservoirs are located in the following image, and identified as butane tanks:

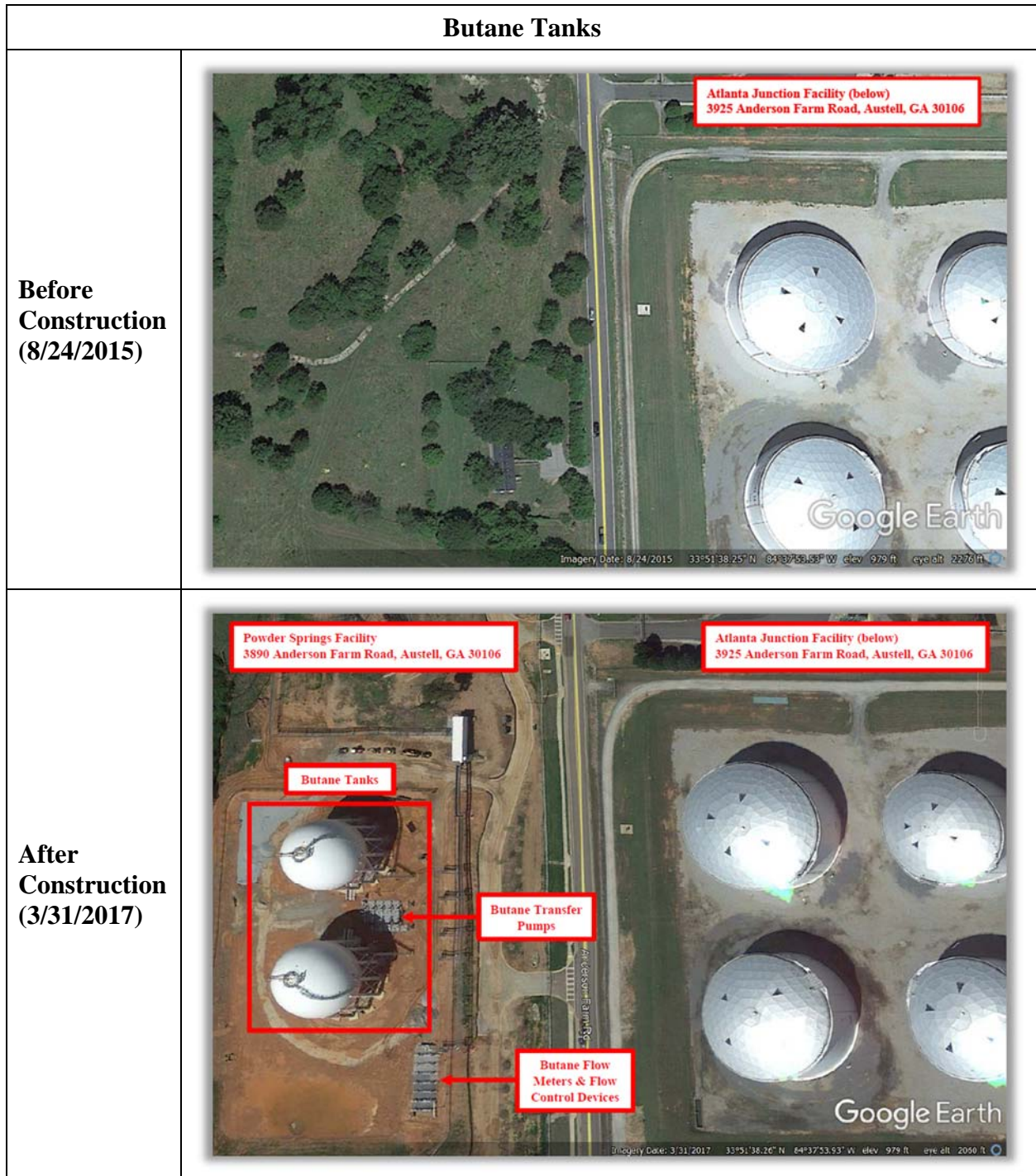


Exhibit 8.

49. Accordingly, Defendants' butane blending systems satisfy limitation (a) of claim 7.

50. **Claim 7, Limitation (b)**. Claim 7 further recites “an injector valve for discharging butane into said gasoline.”

51. Defendants’ butane blending systems include an injector valve for discharging butane into the gasoline.

52. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that “Powder Springs Logistics LLC is a Joint Venture that has constructed a facility in Georgia to enable in-line blending of butane into gasoline flowing through Colonial’s pipeline. It is intended that customers of the Joint Venture will purchase and ship to designated destinations on the pipeline such quantities of gasoline as are created as a result of the Joint Venture’s butane injections. Colonial admits that affiliates of Colonial and of Magellan Midstream Partners, LLP participate in the Joint Venture.” **Exhibit 1** at 2, ¶ 3.

53. In its SLUP application, Magellan stated that “[e]ight (8) vertical can pumps . . . will be installed to transfer butane from the spheres through the Injection System to the Injection Point.” **Exhibit 5** at 12.

54. The RMP from the Powder Springs facility states that “Powder Springs Logistics is [a] butane storage and blending terminal which stores butane and blends into refined products pipelines. . . . The equipment which handles butane includes two pressure vessels, ten injection pumps and associated piping. The butane pressure vessel and associated piping may contain as much as 27,821,556 lbs of butane.” **Exhibit 6** at 2.

55. Further, the Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via

a butane injection line 10; . . . a flow control valve 16 or other controller (e.g., a variable frequency drive) provided in the butane injection line 10” **Exhibit 7** at 8:25-45.

56. On information and belief, the injector valves (such as, a control valve or a valve in combination with a pump) for discharging butane into the gasoline product, identified as flow control devices in the image below, are installed next to the butane tanks and butane transfer meters:

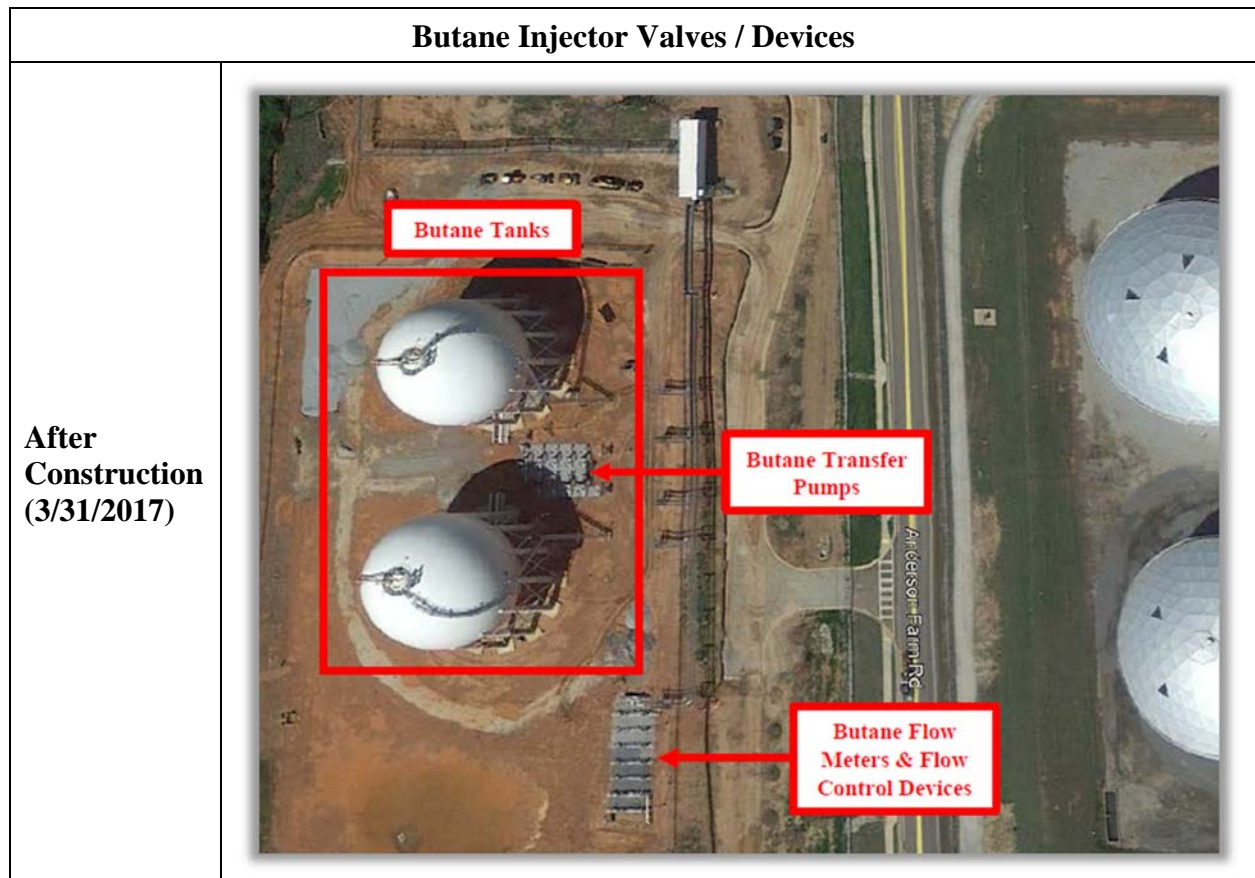

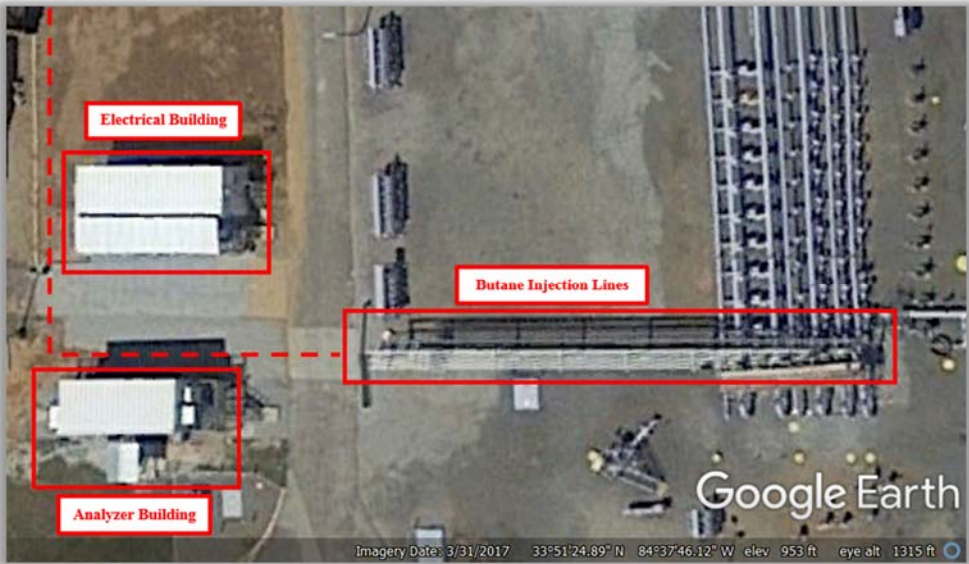


Exhibit 8.

57. On information and belief, butane injection lines are installed from the butane injection devices to the gasoline pipelines and identified in the images below for both the spur lines and Line 1:

Spur Injection Lines	
<p>Before Construction (5/7/2016)</p>	 <p>Imagery Date: 5/7/2016 33°51'25.71" N 84°37'47.88" W elev 953 ft eye alt 1315 ft</p>
<p>After Construction (3/31/2017)</p>	 <p>Imagery Date: 3/31/2017 33°51'24.89" N 84°37'46.12" W elev 953 ft eye alt 1315 ft</p>

Line 1 Pipeline Injection Line	
Before Construction (5/7/2016)	
After Construction (3/31/2017)	

Exhibit 8.

58. Accordingly, Defendants' butane blending systems satisfy limitation (b) of claim 7.

59. **Claim 7, Limitation (c)**. Claim 7 further recites “a vapor pressure analyzer connected to said pipe, said analyzer configured to determine the vapor pressure of the blend of gasoline and butane, and to transmit said vapor pressure to a processor.”

60. On information and belief, Defendants’ butane blending systems include a vapor pressure analyzer connected to the pipe and configured to determine the vapor pressure of the blend of gasoline and butane.

61. On information and belief, Defendants’ butane blending systems include a vapor pressure analyzer connected to the pipe and configured to transmit the vapor pressure to a processor.

62. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that “[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification.” **Exhibit 1** at 18, ¶ 25.


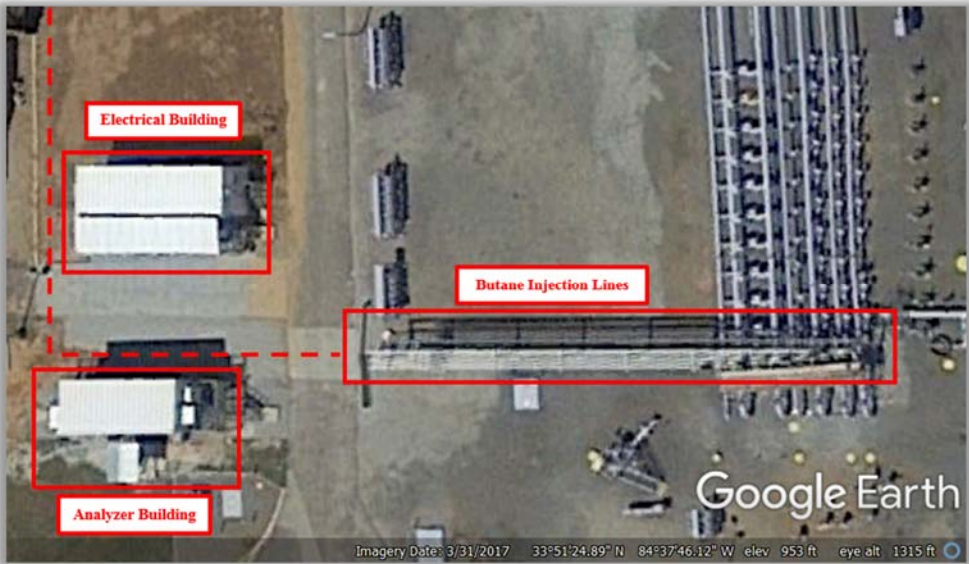
63. One of the specifications for which the system is “calibrated” is the vapor pressure of the gasoline. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial explained that the various grades of gasoline in its pipeline must meet certain specifications, and that “[t]hese specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure (‘RVP’) and vapor-to-liquid ratio. Accordingly, one shipper’s product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper’s product, while both shipper’s products may still meet the same product specification, *e.g.*, A1 gasoline.” **Exhibit 1** at 12-13, ¶ 6.

64. Further, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that "the Joint Venture has invested millions of dollars in the construction of facilities to enable butane injections into the Colonial pipeline in Atlanta, Georgia." **Exhibit 1** at 6, ¶ 26.

65. In addition, Magellan stated in its SLUP application that "[t]he site will consist of three (3) buildings (control building, testing facility, and office), six (6) offloading spots for offloading butane into the storage system, two (2) 60,000 bbl (working capacity) spheres each 90 feet in diameter, and eight (8) vertical can pumps." **Exhibit 5** at 4.

66. Further, the Magellan patent provides that "[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . an online sampler and RVP analyzer 14 which automatically samples and determines the RVP of the gasoline/butane blend in the gasoline line 4 at a point downstream of the butane injection point 5 and downstream of the mixer 12; . . . and a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14" **Exhibit 7** at 8:25-45.

67. On information and belief, the vapor pressure analyzers connected to the pipe are located in the following building identified as analyzer building for the spur lines and Line 1 images below:

Spur Injection Lines	
<p>Before Construction (5/7/2016)</p>	 <p>Imagery Date: 5/7/2016 33°51'25.71" N 84°37'47.88" W elev 953 ft eye alt 1315 ft</p>
<p>After Construction (3/31/2017)</p>	 <p>Imagery Date: 3/31/2017 33°51'24.89" N 84°37'46.12" W elev 953 ft eye alt 1315 ft</p>

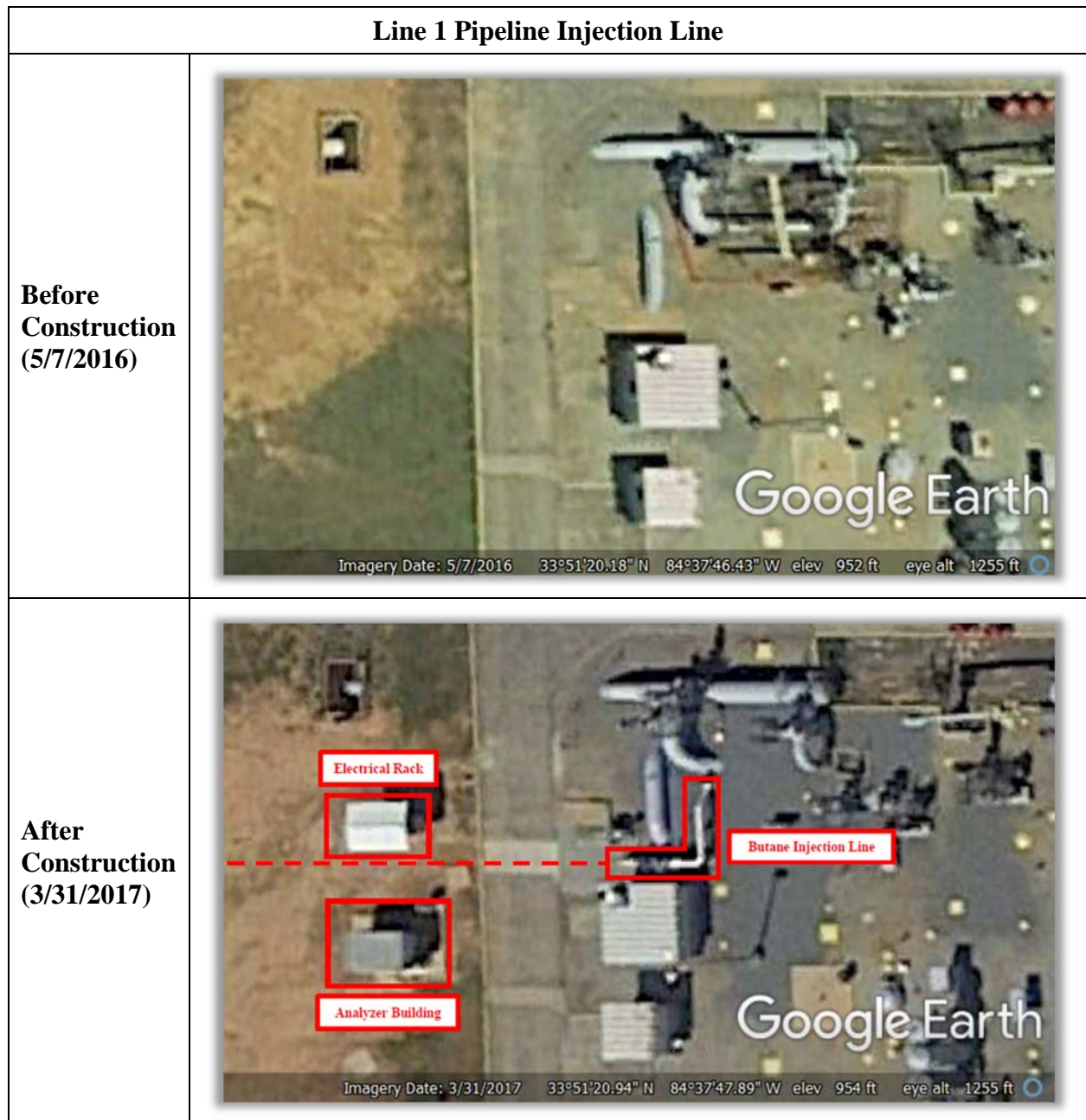


Exhibit 8.

68. Accordingly, on information and belief, Defendants' butane blending systems satisfy limitation (c) of claim 7.

69. **Claim 7, Limitation (d).** Claim 7 further recites "a programmable logic controller governing the flow of butane through said injector valve."

70. On information and belief, Defendants' butane blending systems include a programmable logic controller ("PLC") governing the flow of butane through the injector valve.

71. For example, Magellan stated in its SLUP application that "[e]ight (8) vertical can pumps . . . will be installed to transfer butane from the spheres through the Injection System to the Injection Point." **Exhibit 5** at 12.

72. The RMP for the Powder Springs facility states that "Powder Springs Logistics is [a] butane storage and blending terminal which stores butane and blends into refined products pipelines. . . . The equipment which handles butane includes two pressure vessels, ten injection pumps and associated piping. The butane pressure vessel and associated piping may contain as much as 27,821,556 lbs of butane." **Exhibit 6** at 2.

73. Further, the Magellan patent provides that "[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: one or more, preferably a plurality of, butane bullet tanks 6 or other pressurized butane storage vessels; . . . a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8." **Exhibit 7** at 8:25-45.

74. Accordingly, on information and belief, Defendants' butane blending systems satisfy limitation (d) of claim 7.

75. **Claim 7, Limitation (e).** Claim 7 further recites "a processor programmed to receive the vapor pressure from the analyzer, calculate an amount of butane to inject into the gasoline based on a maximum preprogrammed volatility limit, and provide a control signal to said programmable logic controller according to said maximum preprogrammed volatility limit;

wherein the programmable logic controller is configured to adjust the injector valve to govern the flow of butane through said injector valve into said gasoline based on the signal from the processor.”

76. On information and belief, Defendants’ butane blending systems include a processor programmed to receive the vapor pressure from the analyzer, calculate an amount of butane to inject into the gasoline based on a maximum preprogrammed volatility limit, and provide a control signal to the PLC according to the maximum preprogrammed volatility limit.

77. On information and belief, Defendants’ butane blending systems include a PLC configured to adjust the injector valve to govern the flow of butane through the injector valve into the gasoline based on the signal from the processor.

78. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that “[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification.” **Exhibit 1** at 18, ¶ 25.

79. One of the specifications for which the system is “calibrated” is the vapor pressure of the gasoline. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial explained that the various grades of gasoline in its pipeline must meet certain specifications, and that “[t]hese specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure (‘RVP’) and vapor-to-liquid ratio. Accordingly, one shipper’s product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper’s product, while both shipper’s products may still meet the same product specification, *e.g.*, A1 gasoline.” **Exhibit 1** at 12-13, ¶ 6.

80. Further, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that "the Joint Venture has invested millions of dollars in the construction of facilities to enable butane injections into the Colonial pipeline in Atlanta, Georgia." **Exhibit 1** at 6, ¶ 26.

81. Magellan stated in its SLUP application that "the facility will provide butane blending capabilities that effectively increase the supply of gasoline distributed from Colonial's pipeline that is distributed along the east coast. The new facility will be used to blend a small percentage of butane into gasoline which will meet all federal, state and industry specifications and can be used in all vehicles with spark ignition engines." **Exhibit 5** at 4.

82. In addition, the Magellan patent provides that "[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8." **Exhibit 7** at 8:25-45.

83. Accordingly, on information and belief, Defendants' butane blending systems satisfy limitation (e) of claim 7.

84. On information and belief, Defendants will continue to infringe one or more claims of the '948 patent unless enjoined by this Court.

85. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge, or should have had knowledge, of the earlier-issued U.S. Patent No. 6,679,302 ("the '302 patent") and the '302 patent family, and commercial embodiments thereof, since at least 2006

or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

86. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge, or should have had knowledge, of the earlier-issued the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the following patents in the '302 patent family are cited on the face of the Magellan patent: the '302 patent; U.S. Patent No. 7,032,629 ("the '629 patent"); U.S. Patent No. 7,631,671 ("the '671 patent"); and U.S. Patent Publication No. 2010/0084047 A1 (now U.S. Patent No. 8,176,951 ("the '951 patent")). **Exhibit 7**, References Cited.

87. Magellan and Powder Springs, through joint venturer Magellan, have had further knowledge of the earlier-issued '671 patent since at least 2014 when the Examiner rejected various claims of the Magellan patent as anticipated and/or rendered obvious by the '671 patent (U.S. Patent Publication No. 2006/0278304 A1).

88. Magellan and Powder Springs, through joint venturer Magellan, have had further knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

89. Powder Springs, through joint venturer Colonial, has had knowledge, or should have had knowledge, of Sunoco's butane blending patents and Sunoco's patented systems and methods, and commercial embodiments thereof, since at least its formation in 2014. Such knowledge was obtained during or in relation to various presentations given by Sunoco to Colonial in 2013 regarding the licensing of Sunoco's patented blending systems.

90. The '948 patent is part of the same patent family as the '302, '629, '671, and '951 patents. The '948 patent shares a nearly identical specification with the '671 patent.¹ Like the '302, '629, and '671 patents, the '948 patent claims its earliest priority date to Provisional Application No. 60/267,844, filed February 9, 2001.

91. On information and belief, Defendants have been on notice of the claims of the '948 patent since they first published as U.S. Patent Publication No. 2016/0068775 on March 10, 2016, and have had knowledge of the '948 patent since its date of issuance on November 15, 2016, or at least as of the date of the Original Complaint (October 4, 2017).

92. Despite this knowledge, Defendants continued to make, use, sell and/or offer to sell gasoline blended with butane, and/or systems or methods for the blending of butane and gasoline. On information and belief, Defendants knew or should have known (and currently know or should know) that their actions constitute infringement of the '948 patent, and have had such knowledge since at least 2017 when Defendants' infringement began. As a result, Defendants' infringement of the '948 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants' conduct amounts to willful infringement. *See, e.g.*, MAG-SUN_00003542.

93. As a result of Defendants' infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

¹ The '948 patent contains one additional figure from the '302 patent, which was incorporated by reference in its entirety, and a disclosure related to this figure. *See Exhibit 4*, '948 Patent, Fig. 6, 16:21-17:7.

94. On information and belief, the conduct of Defendants presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

B. Magellan's Blending Systems

95. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Magellan is infringing one or more claims of the '948 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline, including with Magellan's Blending Systems (*see, supra*, Facts Common to Each Claim for Relief, § B).

96. **Claim 7, Preamble.** The preamble of claim 7 recites "[a] system for blending butane with gasoline in a pipe to form a blend of butane and gasoline, wherein the gasoline and the blend of gasoline and butane each have a vapor pressure."

97. Magellan has made, has used, and/or is using systems for blending butane with gasoline in a pipe to form a blend of butane and gasoline, wherein the gasoline and the blend of gasoline and butane each have a vapor pressure. *See, supra*, Facts Common to Each Claim for Relief, § B.

98. Accordingly, Magellan's butane blending systems satisfy the preamble of claim 7.

99. **Claim 7, Limitation (a).** Claim 7 further recites "a butane reservoir in fluid connection with said gasoline."

100. Magellan's butane blending systems include a butane reservoir in fluid connection with the gasoline.

101. For example, the RMP for the East Houston Terminal states: "The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40

CFR 68 regulated substance at this facility is butane. Butane is stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping, storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the system is 9,526,126 lbs of butane.” **Exhibit 10**; *see also* **Exhibit 11** (RMP for Chattanooga II Terminal); **Exhibit 12** (RMP for Greensboro II Terminal).

102. Further, U.S. Patent No. 9,080,111 to Magellan (“the Magellan patent”) provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: one or more, preferably a plurality of, butane bullet tanks 6 or other pressurized butane storage vessels; one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10” **Exhibit 7** at 8:25-45.

103. On information and belief, the butane reservoirs at the East Houston Terminal are located in the following image:



Exhibit 14.

104. Accordingly, Magellan's butane blending systems satisfy limitation (a) of claim 7.

105. **Claim 7, Limitation (b).** Claim 7 further recites "an injector valve for discharging butane into said gasoline."

106. On information and belief, Magellan's butane blending systems include an injector valve for discharging butane into the gasoline.

107. For example, the RMP for the East Houston Terminal states: "The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40 CFR 68 regulated substance at this facility is butane. Butane is stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping,

storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the system is 9,526,126 lbs of butane.” **Exhibit 10**; *see also* **Exhibit 11** (RMP for Chattanooga II Terminal); **Exhibit 12** (RMP for Greensboro II Terminal). Furthermore, the facilities include “valves.” **Exhibit 10** (RMP for the East Houston Terminal) (“The facility complies with the Federal and State requirements for leak detection of valves, pumps, and flanges.”); *see also* **Exhibit 11** (RMP for Chattanooga II Terminal) (same); **Exhibit 12** (RMP for Greensboro II Terminal) (same).

108. Further, the Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10; . . . a flow control valve 16 or other controller (e.g., a variable frequency drive) provided in the butane injection line 10” **Exhibit 7** at 8:25-45.

109. On information and belief, the butane injector valves for discharging butane into gasoline are located along the butane injection lines (blue), as identified in the images below:

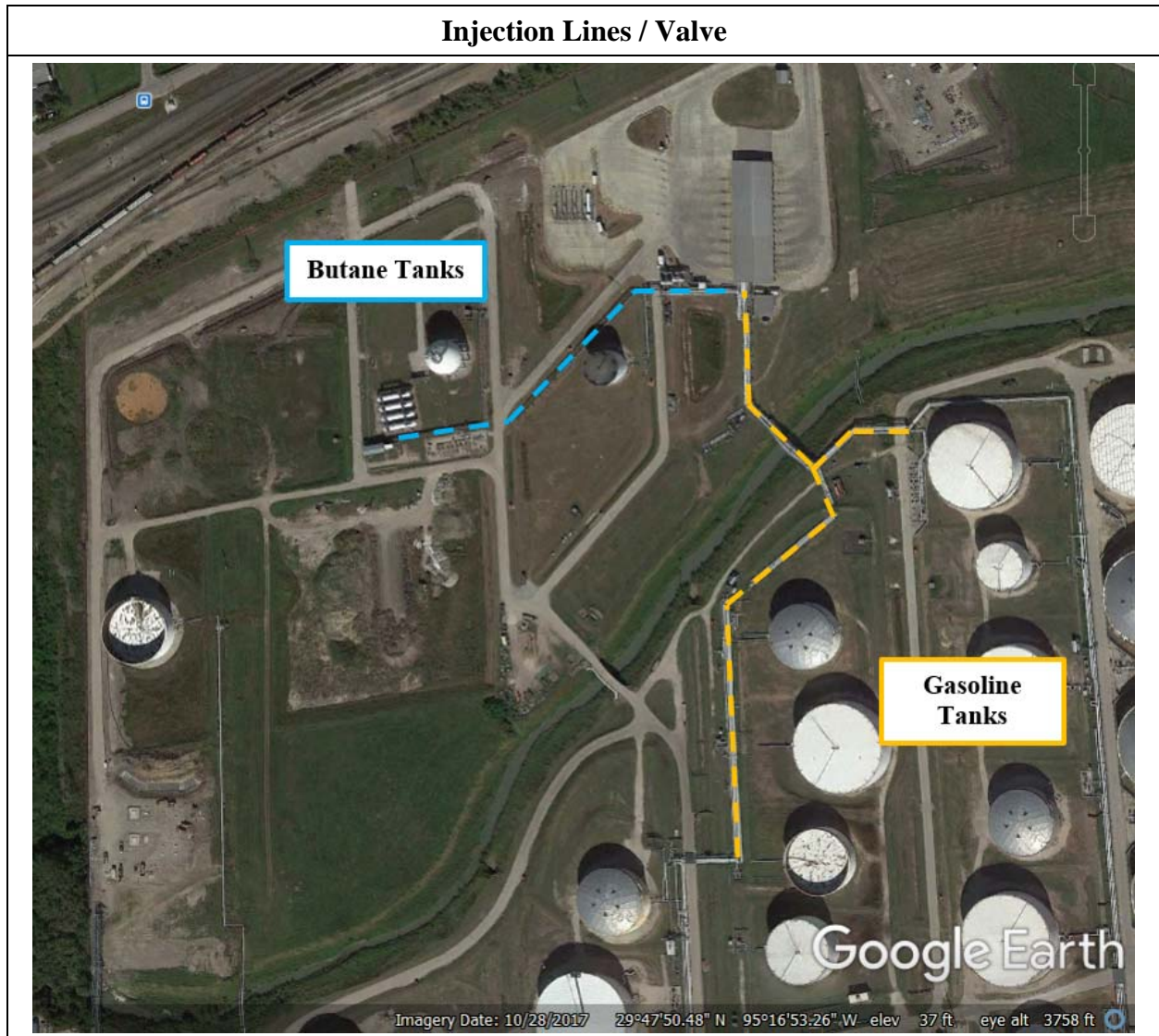


Exhibit 14.

110. Accordingly, Magellan’s butane blending systems satisfy limitation (b) of claim 7.

111. **Claim 7, Limitation (c).** Claim 7 further recites “a vapor pressure analyzer connected to said pipe, said analyzer configured to determine the vapor pressure of the blend of gasoline and butane, and to transmit said vapor pressure to a processor.”

112. On information and belief, Magellan’s butane blending systems include a vapor pressure analyzer connected to the pipe, which is configured to determine the vapor pressure of the blended gasoline/butane and to transmit the vapor pressure to a processor.

113. For example, on information and belief, Magellan's systems include automated equipment, such as on-line analyzers for measuring the vapor pressure of gasoline and transmitting the vapor pressure to a processor. *See, supra*, Facts Common to Each Claim for Relief, § B. More specifically, additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's systems include online analyzers. *See, e.g.*, MAG-SUN_00003361; MAG-SUN_00010754-11158.

114. Further, the Magellan patent provides that "[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . an online sampler and RVP analyzer 14 which automatically samples and determines the RVP of the gasoline/butane blend in the gasoline line 4 at a point downstream of the butane injection point 5 and downstream of the mixer 12; . . . and a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14"

Exhibit 7 at 8:25-45.

115. Accordingly, on information and belief, Magellan's butane blending systems satisfy limitation (c) of claim 7.

116. **Claim 7, Limitation (d)**. Claim 7 further recites "a programmable logic controller governing the flow of butane through said injector valve."

117. On information and belief, Magellan's butane blending systems include a PLC governing the flow of butane through the injector valve.

118. For example, on information and belief, Magellan's systems include automated equipment, such as PLCs for governing the flow of butane through the injector valve. *See, supra*, Facts Common to Each Claim for Relief, § B. More specifically, additional documents have been

produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's systems include PLCs. *See, e.g.*, MAG-SUN_00003363; MAG-SUN_00010754-11158.

119. In addition, the RMP for the East Houston Terminal states: "The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40 CFR 68 regulated substance at this facility is butane. Butane is stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping, storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the system is 9,526,126 lbs of butane." **Exhibit 10**; *see also* **Exhibit 11** (RMP for Chattanooga II Terminal); **Exhibit 12** (RMP for Greensboro II Terminal).

120. Further, the Magellan patent provides that "[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: one or more, preferably a plurality of, butane bullet tanks 6 or other pressurized butane storage vessels; . . . a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8." **Exhibit 7** at 8:25-45.

121. Accordingly, on information and belief, Magellan's butane blending systems satisfy limitation (d) of claim 7.

122. **Claim 7, Limitation (e).** Claim 7 further recites "a processor programmed to receive the vapor pressure from the analyzer, calculate an amount of butane to inject into the gasoline based on a maximum preprogrammed volatility limit, and provide a control signal to said programmable logic controller according to said maximum preprogrammed volatility limit;

wherein the programmable logic controller is configured to adjust the injector valve to govern the flow of butane through said injector valve into said gasoline based on the signal from the processor.”

123. On information and belief, Magellan’s butane blending systems include a processor programmed to receive the vapor pressure from the analyzer, calculate an amount of butane to inject into the gasoline based on a maximum preprogrammed volatility limit, and provide a control signal to the PLC according to the maximum preprogrammed volatility limit, where the PLC is configured to adjust the injector valve to govern the flow of butane through the injector valve into the gasoline based on the signal from the processor.

124. For example, on information and belief, Magellan’s systems include automated equipment, such as processors for calculating an amount of butane to inject into the gasoline and for providing a control signal to a PLC, and PLCs for adjusting the injector valve based on the signal. *See, supra*, Facts Common to Each Claim for Relief, § B. More specifically, additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan’s systems include processors. *See, e.g.*, MAG-SUN_00003363; MAG-SUN_00010754-11158.

125. The Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8.” **Exhibit 7** at 8:25-45.

126. Accordingly, on information and belief, Magellan's butane blending systems satisfy limitation (e) of claim 7.

127. On information and belief, Magellan will continue to infringe one or more claims of the '948 patent unless enjoined by this Court.

128. Magellan has had knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

129. Magellan has had knowledge, or should have had knowledge, of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the following patents in the '302 patent family are cited on the face of the Magellan patent: the '302 patent; the '629 patent; the '671 patent; and U.S. Patent Publication No. 2010/0084047 A1 (now the '951 patent). **Exhibit 7**, References Cited.

130. Magellan has had further knowledge of the earlier-issued '671 patent since at least 2014 when the Examiner rejected various claims of the Magellan patent as anticipated and/or rendered obvious by the '671 patent (U.S. Patent Publication No. 2006/0278304 A1).

131. Magellan has had further knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

132. The '948 patent is part of the same patent family as the '302, '629, '671, and '951 patents. The '948 patent shares a nearly identical specification with the '671 patent.² Like the

² The '948 patent contains one additional figure from the '302 patent, which was incorporated by reference in its entirety, and a disclosure related to this figure. See **Exhibit 4**, '948 Patent, Fig. 6, 16:21-17:7.

'302, '629, and '671 patents, the '948 patent claims its earliest priority date to Provisional Application No. 60/267,844, filed February 9, 2001.

133. On information and belief, Magellan has been on notice of the claims of the '948 patent since they first published as U.S. Patent Publication No. 2016/0068775 on March 10, 2016, and had knowledge of the '948 patent since its date of issuance on November 15, 2016, or at least as of the date of the Original Complaint (October 4, 2017).

134. Despite this knowledge, Magellan continued to make, use, sell and/or offer to sell gasoline blended with butane, and/or systems or methods for the blending of butane and gasoline. On information and belief, Magellan knew or should have known (and currently knows or should know) that its actions constitute infringement of the '948 patent, and has had such knowledge since at least 2016. As a result, Magellan's infringement of the '948 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's conduct amounts to willful infringement. *See, e.g.,* MAG-SUN_00003542.

135. As a result of Magellan's infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

136. On information and belief, the conduct of Magellan presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 9,606,548
(Defendants' Powder Springs System and Magellan's Blending Systems)

137. Sunoco re-alleges and incorporates herein by reference the allegations in each of the preceding paragraphs as if fully set forth herein.

138. On March 28, 2017, U.S. Patent No. 9,606,548 (“the ’548 patent”) was duly and legally issued by the U.S. Patent and Trademark Office (“PTO”) to Mattingly et al. for an invention relating to “Versatile Systems for Continuous In-Line Blending of Butane and Petroleum.” A true and correct copy of the ’548 patent is attached hereto as **Exhibit 9**. The ’548 patent is presumed valid pursuant to 35 U.S.C. § 282.

139. Mattingly et al. assigned all right, title and interest in the ’548 patent to Plaintiff Sunoco Partners Marketing & Terminals L.P.

A. Powder Springs System

140. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Defendants are infringing one or more claims of the ’548 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline.

141. **Claim 1, Preamble.** The preamble of claim 1 recites “[a] system for blending butane with a gasoline stream having a gasoline flow rate.”

142. Defendants have been and/or still are utilizing systems for blending butane with a gasoline stream having a gasoline flow rate at Colonial’s Atlanta Junction facility.

143. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that “Powder Springs Logistics LLC is a Joint Venture that has constructed a facility in Georgia to enable in-line blending of butane into gasoline flowing through Colonial’s pipeline. It is intended that customers of the Joint Venture will purchase and ship to designated destinations on the pipeline such quantities of gasoline as are created as a result of the Joint Venture’s butane injections. Colonial admits that affiliates of Colonial and of Magellan Midstream Partners, LLP participate in the Joint Venture.” **Exhibit 1** at 2, ¶ 3.

144. In addition, Magellan stated in its SLUP application that “the facility will provide butane blending capabilities that effectively increase the supply of gasoline distributed from Colonial’s pipeline that is distributed along the east coast. The new facility will be used to blend a small percentage of butane into gasoline which will meet all federal, state and industry specifications and can be used in all vehicles with spark ignition engines.” **Exhibit 5** at 4.

145. Accordingly, Defendants’ butane blending systems satisfy the preamble of claim 1.

146. **Claim 1, Limitation (a)**. Claim 1 further recites “an injection device injecting the butane into the gasoline stream at a butane flow rate.”

147. Defendants’ butane blending systems include an injection device injecting the butane into the gasoline stream at a butane flow rate.

148. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that “Powder Springs Logistics LLC is a Joint Venture that has constructed a facility in Georgia to enable in-line blending of butane into gasoline flowing through Colonial’s pipeline. It is intended that customers of the Joint Venture will purchase and ship to designated destinations on the pipeline such quantities of gasoline as are created as a result of the Joint Venture’s butane injections. Colonial admits that affiliates of Colonial and of Magellan Midstream Partners, LLP participate in the Joint Venture.” **Exhibit 1** at 2, ¶ 3.

149. In its SLUP application, Magellan stated that “[e]ight (8) vertical can pumps . . . will be installed to transfer butane from the spheres through the Injection System to the Injection Point.” **Exhibit 5** at 12.

150. The RMP from the Powder Springs facility states that “Powder Springs Logistics is [a] butane storage and blending terminal which stores butane and blends into refined products pipelines. . . . The equipment which handles butane includes two pressure vessels, ten injection

pumps and associated piping. The butane pressure vessel and associated piping may contain as much as 27,821,556 lbs of butane.” **Exhibit 6.**

151. Further, the Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10; . . . a flow control valve 16 or other controller (e.g., a variable frequency drive) provided in the butane injection line 10” **Exhibit 7** at 8:25-45.

152. On information and belief, the injection devices (such as, a control valve or a valve in combination with a pump) for discharging butane into the gasoline product, identified as flow control devices in the image below, are installed next to the butane storage tanks and butane transfer meters:

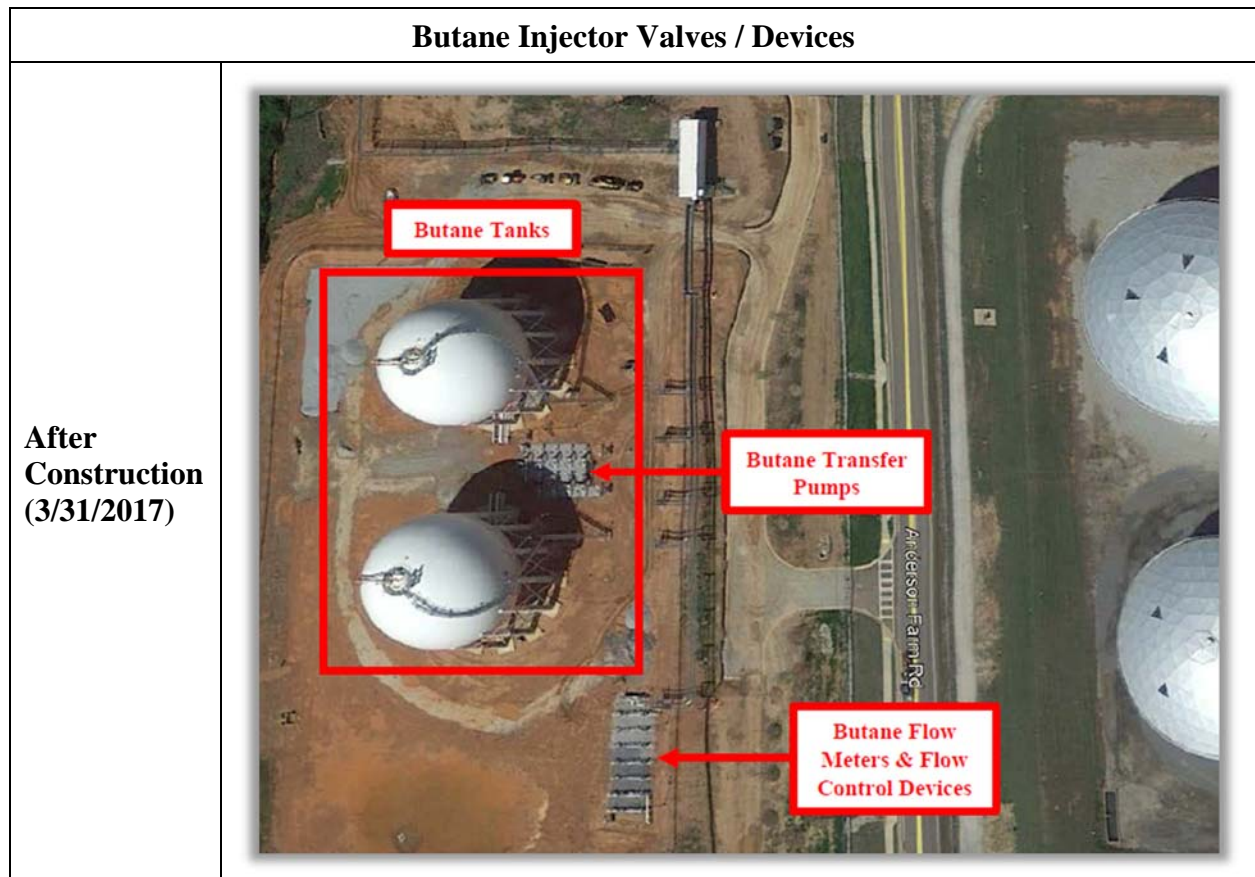
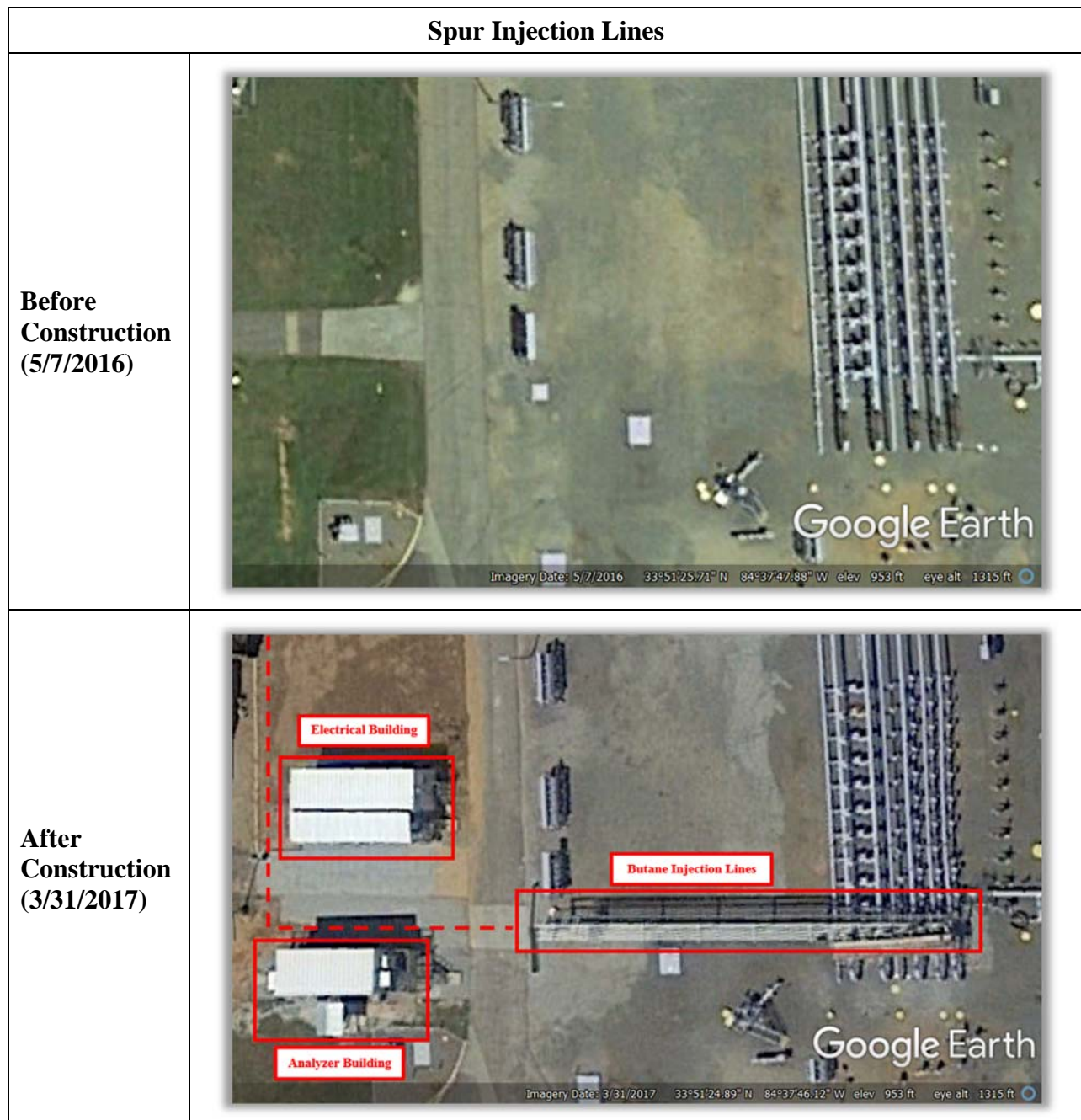


Exhibit 8.

153. On information and belief, butane injection lines are installed from the butane injection devices to the gasoline pipelines and identified in the images below for both the spur lines and Line 1:



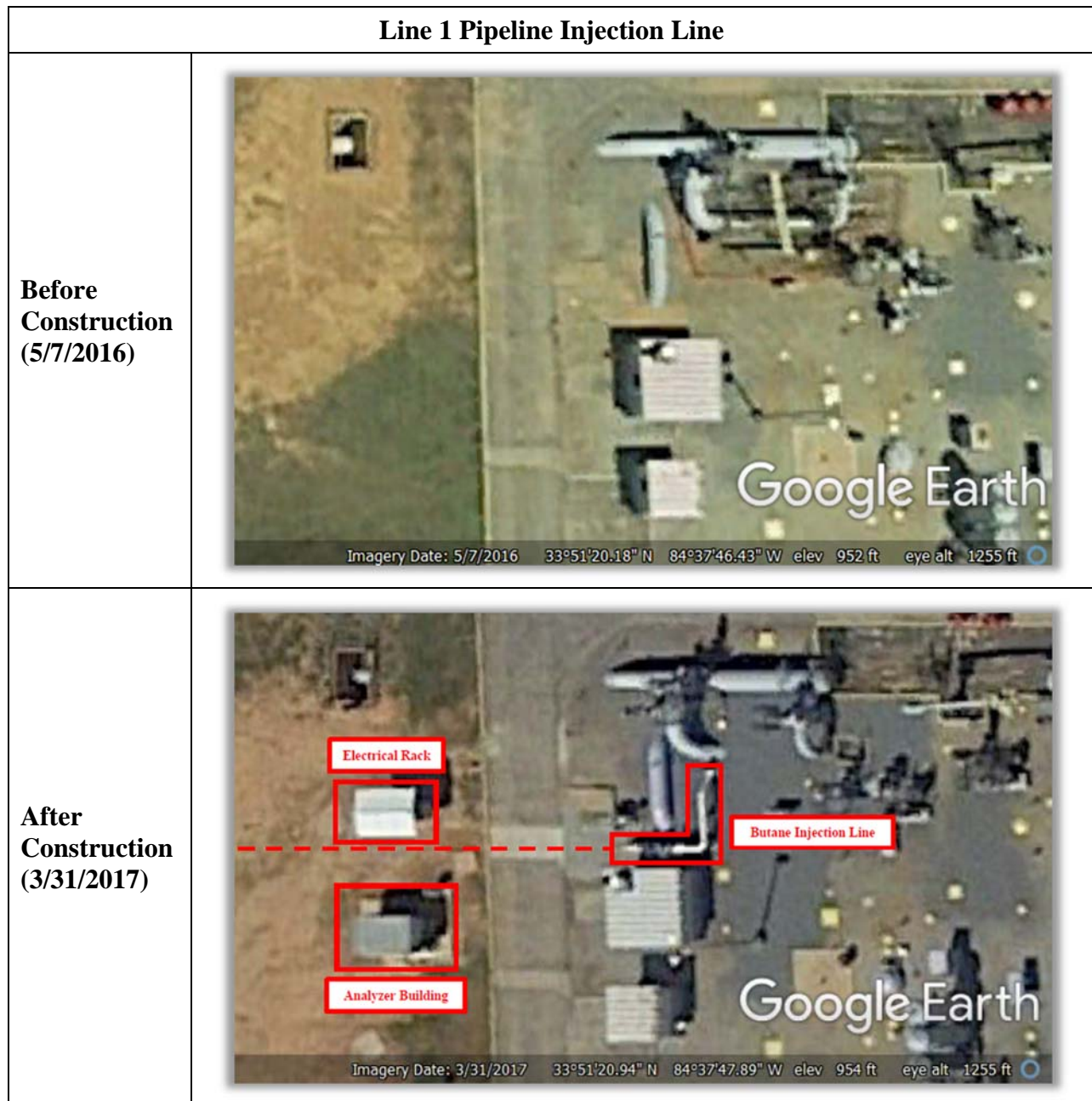


Exhibit 8.

154. Accordingly, Defendants' blending systems satisfy limitation (a) of claim 1.

155. **Claim 1, Limitation (b).** Claim 1 further recites "a volatility measurement device in communication with the gasoline stream, the volatility measurement device configured to output data representative of a volatility measurement."

156. On information and belief, Defendants' butane blending systems include a volatility measurement device in communication with the gasoline stream and configured to output data representative of a volatility measurement.

157. For example, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that "[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification." **Exhibit 1** at 18, ¶ 25.

158. One of the specifications for which the system is "calibrated" is the vapor pressure of the gasoline. For example, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial explained that the various grades of gasoline in its pipeline must meet certain specifications, and that "[t]hese specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure ('RVP') and vapor-to-liquid ratio. Accordingly, one shipper's product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper's product, while both shipper's products may still meet the same product specification, *e.g.*, A1 gasoline." **Exhibit 1** at 12-13, ¶ 6.


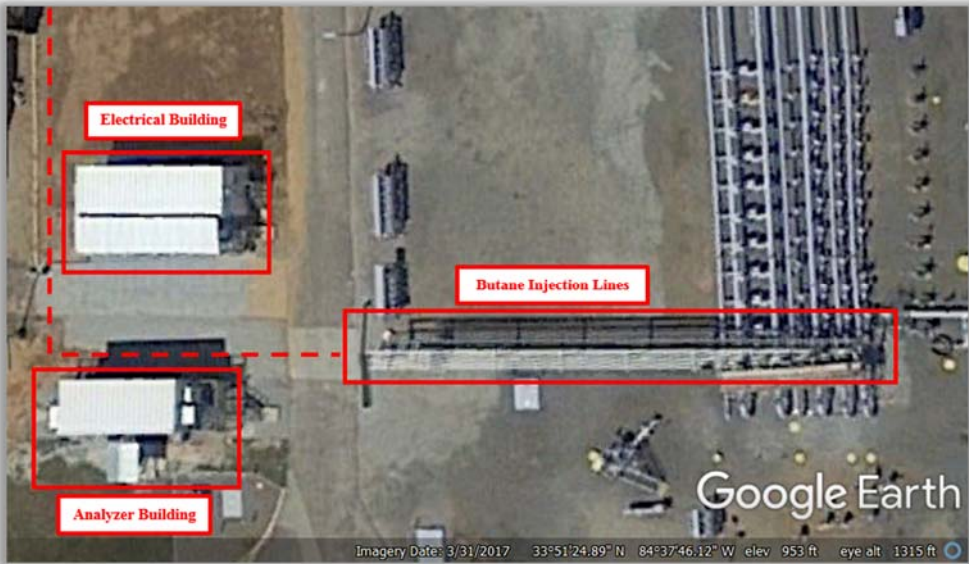
159. Further, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that "the Joint Venture has invested millions of dollars in the construction of facilities to enable butane injections into the Colonial pipeline in Atlanta, Georgia." **Exhibit 1** at 6, ¶ 26.

160. In addition, Magellan stated in its SLUP application that "[t]he site will consist of three (3) buildings (control building, testing facility, and office), six (6) offloading spots for

offloading butane into the storage system, two (2) 60,000 bbl (working capacity) spheres each 90 feet in diameter, and eight (8) vertical can pumps.” **Exhibit 5** at 4.

161. Further, the Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . an online sampler and RVP analyzer 14 which automatically samples and determines the RVP of the gasoline/butane blend in the gasoline line 4 at a point downstream of the butane injection point 5 and downstream of the mixer 12; . . . and a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14” **Exhibit 7** at 8:25-45.

162. On information and belief, the volatility measurement device in communication with the gasoline stream is located in the analyzer building identified below for the spur lines and Line 1:

Spur Injection Lines	
Before Construction (5/7/2016)	
After Construction (3/31/2017)	

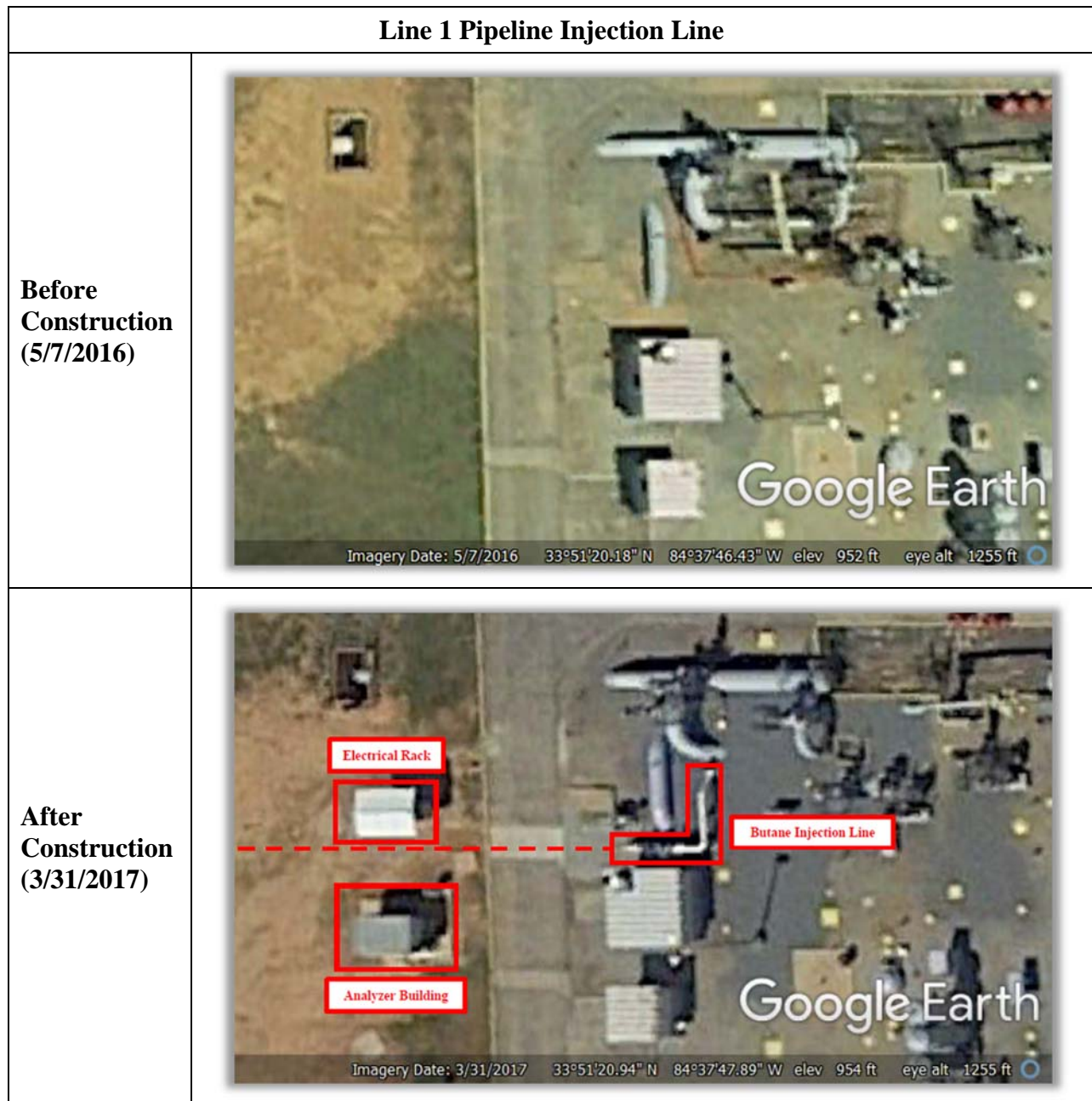


Exhibit 8.

163. Accordingly, on information and belief, Defendants' butane blending systems satisfy limitation (b) of claim 1.

164. **Claim 1, Limitation (c).** Claim 1 further recites "a processor in connection with the injection device and the volatility measurement device, the processor configured to: receive

the volatility measurement; receive a target volatility value; determine an adjustment to the butane flow rate based on the volatility measurement and the target volatility value; and output a signal representative of the adjustment to the injection device.”

165. On information and belief, Defendants’ butane blending systems include a processor in connection with the injection device and the volatility measurement device.

166. On information and belief, Defendants’ butane blending systems include a processor configured to: receive the volatility measurement; receive a target volatility value; determine an adjustment to the butane flow rate based on the volatility measurement and the target volatility value; and output a signal representative of the adjustment to the injection device.

167. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that “[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification.” **Exhibit 1** at 18, ¶ 25.

168. One of the specifications for which the system is “calibrated” is the vapor pressure of the gasoline. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial explained that the various grades of gasoline in its pipeline must meet certain specifications, and that “[t]hese specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure (‘RVP’) and vapor-to-liquid ratio. Accordingly, one shipper’s product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper’s product, while both shipper’s products may still meet the same product specification, *e.g.*, A1 gasoline.” **Exhibit 1** at 12-13, ¶ 6.

169. Further, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that "the Joint Venture has invested millions of dollars in the construction of facilities to enable butane injections into the Colonial pipeline in Atlanta, Georgia." **Exhibit 1** at 6, ¶ 26.

170. Magellan stated in its SLUP application that "the facility will provide butane blending capabilities that effectively increase the supply of gasoline distributed from Colonial's pipeline that is distributed along the east coast. The new facility will be used to blend a small percentage of butane into gasoline which will meet all federal, state and industry specifications and can be used in all vehicles with spark ignition engines." **Exhibit 5** at 4.

171. In addition, the Magellan patent provides that "[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8." **Exhibit 7** at 8:25-45.

172. Accordingly, on information and belief, Defendants' butane blending systems satisfy limitation (c) of claim 1.

173. **Claim 3**. Furthermore, claim 3 of the '548 patent recites: "The system of claim 1, further comprising a plurality of gasoline streams each associated with a different type of gasoline, at least one gasoline stream being selectable for blending with the butane."

174. On information and belief, Defendants' butane blending systems include a plurality of gasoline streams each associated with a different type of gasoline, at least one gasoline stream being selectable for blending with the butane.

175. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that “[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification.” **Exhibit 1** at 18, ¶ 25.

176. One of the specifications for which the system is “calibrated” is the vapor pressure of various types of gasoline. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial explained that “[t]he different types and grades of petroleum products that Colonial ships must meet Colonial’s published product specifications, which set forth the minimum and maximum requirements for each type and grade of product admissible into the pipeline, *e.g.*, regular gasoline, premium gasoline, diesel, jet fuel, etc. These specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure (‘RVP’) and vapor-to-liquid ratio. Accordingly, one shipper’s product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper’s product, while both shipper’s products may still meet the same product specification, *e.g.*, A1 gasoline.” **Exhibit 1** at 12-13, ¶ 6.

177. Further, Magellan stated in its SLUP application that “the facility will provide butane blending capabilities that effectively increase the supply of gasoline distributed from Colonial’s pipeline that is distributed along the east coast. The new facility will be used to blend a small percentage of butane into gasoline which will meet all federal, state and industry specifications and can be used in all vehicles with spark ignition engines.” **Exhibit 5** at 4.

178. Accordingly, on information and belief, Defendants’ butane blending systems also satisfy claim 3.

179. On information and belief, Defendants will infringe one or more claims of the '548 patent unless enjoined by this Court.

180. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge of the earlier-issued the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

181. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge, or should have had knowledge, of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the following patents in the '302 patent family are cited on the face of the Magellan patent: the '302 patent; the '629 patent; the '671 patent; and U.S. Patent Publication No. 2010/0084047 A1 (now the '951 patent). **Exhibit 7**, References Cited.

182. Magellan and Powder Springs, through joint venturer Magellan, have had further knowledge of the earlier-issued '671 patent since at least 2014 when the Examiner rejected various claims of the Magellan patent as anticipated and/or rendered obvious by the '671 patent (U.S. Patent Publication No. 2006/0278304 A1).

183. Magellan and Powder Springs, through joint venturer Magellan, have had further knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

184. Powder Springs, through joint venturer Colonial, has had knowledge, or should have had knowledge, of Sunoco's butane blending patents and Sunoco's patented systems and methods, and commercial embodiments thereof, since at least its formation in 2014. Such

knowledge was obtained during or in relation to various presentations given by Sunoco to Colonial in 2013 regarding the licensing of Sunoco's patented blending systems.

185. The '548 patent is part of the same patent family as the '302, '629, '671, and '951 patents. The '548 patent shares a nearly identical specification with the '671 patent.³ Like the '302, '629, and '671 patents, the '548 patent claims its earliest priority date to Provisional Application No. 60/267,844, filed February 9, 2001.

186. On information and belief, Defendants have been on notice of the claims of the '548 patent since they first published as U.S. Patent Publication No. 2016/0075958 on March 17, 2016, and have had knowledge of the '548 patent since its date of issuance on March 28, 2017, or at least as of the date of the Original Complaint (October 4, 2017).

187. Despite this knowledge, Defendants continued to make, use, sell and/or offer to sell gasoline blended with butane and/or systems or methods for the blending of butane and gasoline. On information and belief, Defendants knew or should have known (and currently know or should know) that their actions constitute infringement of the '548 patent, and have had such knowledge since at least 2017 when Defendants' infringement began. As a result, Defendants' infringement of the '548 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants' conduct amounts to willful infringement. *See, e.g.*, MAG-SUN_00003542.

188. As a result of Defendants' infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

³ The '548 patent contains one additional figure from the '302 patent, which was incorporated by reference in its entirety, and a disclosure related to this figure. *See Exhibit 4*, '548 Patent, Fig. 6, 16:23-17:9.

189. On information and belief, the conduct of Defendants presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

B. Magellan's Blending Systems

190. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Magellan is infringing one or more claims of the '548 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline, including with Magellan's Blending Systems (*see, supra*, Facts Common to Each Claim for Relief, § B).

191. **Claim 1, Preamble.** The preamble of claim 1 recites "[a] system for blending butane with a gasoline stream having a gasoline flow rate."

192. Magellan has been and/or still is utilizing systems for blending butane with a gasoline stream having a gasoline flow rate. *See, supra*, Count I, Magellan's Blending Systems, '948 Patent, Claim 7, Preamble.

193. Accordingly, Magellan's butane blending systems satisfy the preamble of claim 1.

194. **Claim 1, Limitation (a).** Claim 1 further recites "an injection device injecting the butane into the gasoline stream at a butane flow rate."

195. On information and belief, Magellan's butane blending systems include an injection device injecting the butane into the gasoline stream at a butane flow rate. *See, supra*, Count I, Magellan's Blending Systems, '948 Patent, Claim 7, Limitation (b).

196. Accordingly, Magellan's blending systems satisfy limitation (a) of claim 1.

197. **Claim 1, Limitation (b)**. Claim 1 further recites “a volatility measurement device in communication with the gasoline stream, the volatility measurement device configured to output data representative of a volatility measurement.”

198. On information and belief, Magellan’s butane blending systems include a volatility measurement device in communication with the gasoline stream and configured to output data representative of a volatility measurement. *See, supra*, Count I, Magellan’s Blending Systems, ’948 Patent, Claim 7, Limitation (c).

199. Accordingly, on information and belief, Magellan’s butane blending systems satisfy limitation (b) of claim 1.

200. **Claim 1, Limitation (c)**. Claim 1 further recites “a processor in connection with the injection device and the volatility measurement device, the processor configured to: receive the volatility measurement; receive a target volatility value; determine an adjustment to the butane flow rate based on the volatility measurement and the target volatility value; and output a signal representative of the adjustment to the injection device.”

201. On information and belief, Magellan’s butane blending systems include a processor in connection with the injection device and the volatility measurement device, which is configured to: receive the volatility measurement; receive a target volatility value; determine an adjustment to the butane flow rate based on the volatility measurement and the target volatility value; and output a signal representative of the adjustment to the injection device. *See, supra*, Count I, Magellan’s Blending Systems, ’948 Patent, Claim 7, Limitation (e).

202. Accordingly, on information and belief, Magellan’s butane blending systems satisfy limitation (c) of claim 1.

203. On information and belief, Magellan will infringe one or more claims of the '548 patent unless enjoined by this Court.

204. Magellan has had knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

205. Magellan has had knowledge, or should have had knowledge, of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the following patents in the '302 patent family are cited on the face of the Magellan patent: the '302 patent; the '629 patent; the '671 patent; and U.S. Patent Publication No. 2010/0084047 A1 (now the '951 patent). **Exhibit 7**, References Cited.

206. Magellan has had further knowledge of the earlier-issued '671 patent since at least 2014 when the Examiner rejected various claims of the Magellan patent as anticipated and/or rendered obvious by the '671 patent (U.S. Patent Publication No. 2006/0278304 A1).

207. Magellan has had further knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

208. The '548 patent is part of the same patent family as the '302, '629, '671, and '951 patents. The '548 patent shares a nearly identical specification with the '671 patent.⁴ Like the '302, '629, and '671 patents, the '548 patent claims its earliest priority date to Provisional Application No. 60/267,844, filed February 9, 2001.

⁴ The '548 patent contains one additional figure from the '302 patent, which was incorporated by reference in its entirety, and a disclosure related to this figure. *See Exhibit 4*, '548 Patent, Fig. 6, 16:23-17:9.

209. On information and belief, Magellan has been on notice of the claims of the '548 patent since they first published as U.S. Patent Publication No. 2016/0075958 on March 17, 2016, and had knowledge of the '548 patent since its date of issuance on March 28, 2017, or at least as of the date of the Original Complaint (October 4, 2017).

210. Despite this knowledge, Magellan continued to make, use, sell and/or offer to sell gasoline blended with butane and/or systems or methods for the blending of butane and gasoline. On information and belief, Magellan knew or should have known (and currently knows or should know) that its actions constitute infringement of the '548 patent, and has had such knowledge since at least 2017. As a result, Magellan's infringement of the '548 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's conduct amounts to willful infringement. *See, e.g.,* MAG-SUN_00003542.

211. As a result of Magellan's infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

212. On information and belief, the conduct of Magellan presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

COUNT III
INFRINGEMENT OF U.S. PATENT NO. 9,207,686
(Defendants' Powder Springs System)

213. Sunoco re-alleges and incorporates herein by reference the allegations in each of the preceding paragraphs as if fully set forth herein.

214. On December 8, 2015, U.S. Patent No. 9,207,686 ("the '686 patent") was duly and legally issued by the U.S. Patent and Trademark Office ("PTO") to Mattingly et al. for an invention

relating to “Versatile Systems for Continuous In-Line Blending of Butane and Petroleum.” A true and correct copy of the ’686 patent is attached hereto as **Exhibit 15**. The ’686 patent is presumed valid pursuant to 35 U.S.C. § 282.

215. Mattingly et al. assigned all right, title and interest in the ’686 patent to Plaintiff Sunoco Partners Marketing & Terminals L.P.

A. Powder Springs System

216. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Defendants are infringing one or more claims of the ’686 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline.

217. **Claim 16, Preamble.** The preamble of claim 7 recites “[a] method for in-line blending of petroleum and a volatility modifying agent.”

218. Defendants have made, used, and/or are using systems and methods for in-line blending of gasoline and a volatility modifying agent (e.g., butane).

219. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial admitted that “Powder Springs Logistics LLC is a Joint Venture that has constructed a facility in Georgia to enable in-line blending of butane into gasoline flowing through Colonial’s pipeline. It is intended that customers of the Joint Venture will purchase and ship to designated destinations on the pipeline such quantities of gasoline as are created as a result of the Joint Venture’s butane injections. Colonial admits that affiliates of Colonial and of Magellan Midstream Partners, LLP participate in the Joint Venture.” **Exhibit 1** at 2, ¶ 3.

220. Accordingly, Defendants’ butane blending methods satisfy the preamble.

221. **Claim 16, Limitation (a)**. Claim 16 further recites “providing a petroleum stream that comprises a petroleum vapor pressure and a flow rate.”

222. Defendants’ butane blending methods include providing a petroleum stream that comprises a petroleum vapor pressure and a flow rate.

223. For example, Magellan’s employee Nicholas Huff stated in his declaration: “PSL does not blend butane into all fungible batches of gasoline that pass through the Colonial pipeline at Atlanta Junction. Rather, it blends only for those batches that have margin to blend butane and in situations where gasoline has been pre-sold to a Colonial shipper. Also, PSL does not blend into all grades of gasoline that travel through Atlanta Junction.” D.I. 34 at ¶ 8.

224. Further, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated: “Colonial provides transportation service for a number of distinct petroleum products including various grades of gasoline, diesel, and jet fuel. . . . The different types and grades of petroleum products that Colonial ships must meet Colonial’s published product specifications, which set forth the minimum and maximum requirements for each type and grade of product admissible into the pipeline, *e.g.*, regular gasoline, premium gasoline, diesel, jet fuel, etc. These specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure (‘RVP’) and vapor-to-liquid ratio. Accordingly, one shipper’s product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper’s product, while both shipper’s products may still meet the same product specification, *e.g.*, A1 gasoline. For the products that it ships, Colonial publishes its specifications, which are incorporated into the Tariff and are available to shippers like GEW at all times. . . . To move the various types and grades of petroleum products through the pipeline, Colonial operates what is known as a ‘batched system,’ meaning that

products of like kind and specification are transported in batches that are segregated from other batches consisting of products of different type and specification. Batches are pushed through the pipeline in succession, with principles of hydraulics keeping batches of different specifications of product from blending into each other, except at ‘interface’ points where the successive batches meet.” **Exhibit 1** at 12–13, ¶¶ 5–7.

225. Accordingly, Defendants’ butane blending methods satisfy limitation (a).

226. **Claim 16, Limitation (b)**. Claim 16 further recites “providing an agent stream that comprises an agent vapor pressure.”

227. Defendants’ butane blending methods include providing an agent stream that comprises an agent vapor pressure. *See, supra*, Count I, Powder Springs System, ’948 Patent, Claim 7, Limitation (a).

228. The butane stream comprises a butane vapor pressure. *See, e.g.* D.I. 38, M. Nikolaou Decl., ¶¶ 32-33 (“Butane has higher volatility than gasoline, and adding relatively small amounts of butane to gasoline can increase the volatility of the gasoline blend. . . . Butane mixing impacts the volatility (i.e., RVP) of a batch or stream of gasoline, and must be controlled.”).

229. Accordingly, Defendants’ butane blending methods satisfy limitation (b).

230. **Claim 16, Limitation (c)**. Claim 16 further recites “providing an allowable vapor pressure.”

231. Defendants’ butane blending methods include providing an allowable vapor pressure. *See, supra*, Count I, Powder Springs System, ’948 Patent, Claim 7, Limitation (e).

232. For example, Magellan’s employee Nicholas Huff stated in his declaration: “PSL does not blend butane into all fungible batches of gasoline that pass through the Colonial pipeline at Atlanta Junction. Rather, it blends only for those batches that have margin to blend butane and

in situations where gasoline has been pre-sold to a Colonial shipper. Also, PSL does not blend into all grades of gasoline that travel through Atlanta Junction. . . . The downstream customers then have the option of further blending butane to the maximum RVP allowed by EPA and their own state and local regulations (which may be higher than the maximum permitted for the applicable grade of gasoline on the Colonial pipeline system).” D.I. 34 at ¶¶ 8-9.

233. Similarly, in Defendants’ Answering Brief in Opposition to Sunoco’s Motion for a Preliminary Injunction, Defendants stated: “The reality is that not every batch of gasoline on Colonial’s pipeline is blended at PSL and those that are blended are blended to an RVP target below the maximum, which would allow downstream operations to continue to blend.” D.I. 21 at 16–17.

234. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants’ butane blending methods include providing an allowable vapor pressure. *See, e.g.*, MAG-SUN_00000018 at 20–23, 26–27.

235. Accordingly, Defendants’ butane blending methods satisfy limitation (c).

236. **Claim 16, Limitations (d)–(e)**. Claim 16 further recites “calculating a blend ratio based upon a blended petroleum vapor pressure, said agent vapor pressure, said flow rate and said allowable vapor pressure; blending said agent stream and said petroleum stream at said blend ratio to provide a blended petroleum stream wherein the blended vapor pressure is less than or equal to said allowable petroleum vapor pressure.”

237. On information and belief, Defendants’ butane blending methods include calculating a blend ratio based upon a blended petroleum vapor pressure, the agent vapor pressure, the flow rate and the allowable vapor pressure, and then blending the agent stream and the

petroleum stream at the blend ratio to provide a blended petroleum stream with a vapor pressure that is less than or equal to the allowable petroleum vapor pressure.

238. For example, Magellan’s employee Nicholas Huff stated in his declaration: “PSL does not blend butane into all fungible batches of gasoline that pass through the Colonial pipeline at Atlanta Junction. Rather, it blends only for those batches that have margin to blend butane and in situations where gasoline has been pre-sold to a Colonial shipper. Also, PSL does not blend into all grades of gasoline that travel through Atlanta Junction. . . . The downstream customers then have the option of further blending butane to the maximum RVP allowed by EPA and their own state and local regulations (which may be higher than the maximum permitted for the applicable grade of gasoline on the Colonial pipeline system).” D.I. 34 at ¶¶ 8-9.

239. Similarly, in Defendants’ Answering Brief in Opposition to Sunoco’s Motion for a Preliminary Injunction, Defendants stated: “The reality is that not every batch of gasoline on Colonial’s pipeline is blended at PSL and those that are blended are blended to an RVP target below the maximum, which would allow downstream operations to continue to blend.” D.I. 21 at 16–17.

240. Further, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that “[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification.” **Exhibit 1** at 18, ¶ 25. One of the specifications for which the system is “calibrated” is the vapor pressure of the gasoline, such that the allowable vapor pressure of gasoline is not exceeded. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial explained that the various grades of gasoline in its pipeline must meet certain specifications, and that “[t]hese specifications include acceptable ranges for various chemical

attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure (‘RVP’) and vapor-to-liquid ratio. Accordingly, one shipper’s product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper’s product, while both shipper’s products may still meet the same product specification, *e.g.*, A1 gasoline.” *Id.* at 12-13, ¶ 6.

241. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants’ butane blending methods include calculating a blend ratio based upon a blended petroleum vapor pressure, a butane vapor pressure, a flow rate and an allowable vapor pressure. *See, e.g.*, MAG-SUN_00000018 at 20–23, 26–27.

242. Accordingly, Defendants’ butane blending methods satisfy limitations (d) and (e).

243. **Claim 16, Limitation (f).** Claim 16 further recites “measuring vapor pressure of the blended petroleum stream.”

244. Defendants’ butane blending methods include measuring vapor pressure of the blended petroleum stream.

245. For example, Magellan’s employee Nicholas Huff stated in his declaration: “PSL does not blend butane into all fungible batches of gasoline that pass through the Colonial pipeline at Atlanta Junction. Rather, it blends only for those batches that have margin to blend butane and in situations where gasoline has been pre-sold to a Colonial shipper. . . . Also, PSL’s ability to make bulk purchases of butane allows it to often negotiate a lower per barrel price. Upstream blending also reduces the chance of error in regulatory compliance. Because the blended product does not go directly to a tanker truck for distribution, there are more opportunities to test and prevent over-blending.” D.I. 34 at ¶¶ 8, 12.

246. Similarly, in Defendants' Answering Brief in Opposition to Sunoco's Motion for a Preliminary Injunction, Defendants stated: "The reality is that not every batch of gasoline on Colonial's pipeline is blended at PSL and those that are blended are blended to an RVP target below the maximum, which would allow downstream operations to continue to blend." D.I. 21 at 16–17.

247. Further, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that "[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification." **Exhibit 1** at 18, ¶ 25. One of the specifications for which the system is "calibrated" is the vapor pressure of the gasoline. For example, in Colonial's Answer and Affirmative Defenses in the *GEW* litigation, Colonial explained that the various grades of gasoline in its pipeline must meet certain specifications, and that "[t]hese specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure ('RVP') and vapor-to-liquid ratio. Accordingly, one shipper's product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper's product, while both shipper's products may still meet the same product specification, *e.g.*, A1 gasoline." *Id.* at 12-13, ¶ 6.

248. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants' butane blending methods include periodically determining the gasoline vapor pressure. *See, e.g.*, MAG-SUN_00000018 at 20–23, 26–27.

249. Accordingly, Defendants' butane blending methods satisfy limitation (f).

250. On information and belief, Defendants will infringe one or more claims of the '686 patent unless enjoined by this Court.

251. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge of the earlier-issued the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

252. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge, or should have had knowledge, of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the following patents in the '302 patent family are cited on the face of the Magellan patent: the '302 patent; the '629 patent; the '671 patent; and U.S. Patent Publication No. 2010/0084047 A1 (now the '951 patent). **Exhibit 7**, References Cited.

253. Magellan and Powder Springs, through joint venturer Magellan, have had further knowledge of the earlier-issued '671 patent since at least 2014 when the Examiner rejected various claims of the Magellan patent as anticipated and/or rendered obvious by the '671 patent (U.S. Patent Publication No. 2006/0278304 A1).

254. Magellan and Powder Springs, through joint venturer Magellan, have had further knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

255. Powder Springs, through joint venturer Colonial, has had knowledge, or should have had knowledge, of Sunoco's butane blending patents and Sunoco's patented systems and methods, and commercial embodiments thereof, since at least its formation in 2014. Such

knowledge was obtained during or in relation to various presentations given by Sunoco to Colonial in 2013 regarding the licensing of Sunoco's patented blending systems.

256. The '686 patent is part of the same patent family as the '302, '629, '671, and '951 patents. The '686 patent shares an identical specification with the '671 patent. Like the '302, '629, and '671 patents, the '686 patent claims its earliest priority date to Provisional Application No. 60/267,844, filed February 9, 2001.

257. On information and belief, Defendants have been on notice of the claims of the '686 patent since they first published as U.S. Patent Publication No. 2012/0203038 on August 9, 2012, and have had knowledge of the '686 patent since its date of issuance on December 8, 2015, or at least as of the date of the First Amended Complaint (August 2, 2018).

258. Despite this knowledge, Defendants continued to make, use, sell and/or offer to sell gasoline blended with butane and/or systems or methods for the blending of butane and gasoline. On information and belief, Defendants knew or should have known (and currently know or should know) that their actions constitute infringement of the '686 patent, and have had such knowledge since at least 2017 when Defendants' infringement began. As a result, Defendants' infringement of the '686 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants' conduct amounts to willful infringement. *See, e.g.*, MAG-SUN_00003542.

259. As a result of Defendants' infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

260. On information and belief, the conduct of Defendants presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

B. Magellan's Blending Systems

261. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Magellan is infringing one or more claims of the '686 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline, including with Magellan's Blending Systems (*see, supra*, Facts Common to Each Claim for Relief, § B).

262. **Claim 16, Preamble**. The preamble of claim 7 recites "[a] method for in-line blending of petroleum and a volatility modifying agent."

263. Magellan has made, used, and/or are using systems and methods for in-line blending of gasoline and a volatility modifying agent (e.g., butane). *See, supra*, Facts Common to Each Claim for Relief, § B.

264. Accordingly, Magellan's butane blending methods satisfy the preamble.

265. **Claim 16, Limitation (a)**. Claim 16 further recites "providing a petroleum stream that comprises a petroleum vapor pressure and a flow rate."

266. Magellan's butane blending methods include providing a petroleum stream that comprises a petroleum vapor pressure and a flow rate.

267. For example, the RMP for the East Houston Terminal states: "The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40 CFR 68 regulated substance at this facility is butane. Butane is stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping,

storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the system is 9,526,126 lbs of butane.” **Exhibit 10**; *see also* **Exhibit 11** (RMP for Chattanooga II Terminal); **Exhibit 12** (RMP for Greensboro II Terminal). Furthermore, the facilities include “valves.” **Exhibit 10** (RMP for the East Houston Terminal) (“The facility complies with the Federal and State requirements for leak detection of valves, pumps, and flanges.”); *see also* **Exhibit 11** (RMP for Chattanooga II Terminal) (same); **Exhibit 12** (RMP for Greensboro II Terminal) (same).

268. Further, the Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10; . . . a flow control valve 16 or other controller (e.g., a variable frequency drive) provided in the butane injection line 10” **Exhibit 7** at 8:25-45.

269. Accordingly, Magellan’s butane blending methods satisfy limitation (a).

270. **Claim 16, Limitation (b)**. Claim 16 further recites “providing an agent stream that comprises an agent vapor pressure.”

271. Magellan’s butane blending methods include providing an agent stream that comprises an agent vapor pressure. *See, supra*, Count I, Magellan’s Blending Systems, ’948 Patent, Claim 7, Limitation (a).

272. Accordingly, Magellan’s butane blending methods satisfy limitation (b).

273. **Claim 16, Limitation (c)**. Claim 16 further recites “providing an allowable vapor pressure.”

274. Magellan’s butane blending methods include providing an allowable vapor pressure. *See, supra*, Count I, Magellan’s Blending Systems, ’948 Patent, Claim 7, Limitation (e).

275. Accordingly, Magellan's butane blending methods satisfy limitation (c).

276. **Claim 16, Limitations (d)–(e)**. Claim 16 further recites “calculating a blend ratio based upon a blended petroleum vapor pressure, said agent vapor pressure, said flow rate and said allowable vapor pressure; blending said agent stream and said petroleum stream at said blend ratio to provide a blended petroleum stream wherein the blended vapor pressure is less than or equal to said allowable petroleum vapor pressure.”

277. On information and belief, Magellan's butane blending methods include calculating a blend ratio based upon a blended petroleum vapor pressure, the agent vapor pressure, the flow rate and the allowable vapor pressure, and then blending the agent stream and the petroleum stream at the blend ratio to provide a blended petroleum stream with a vapor pressure that is less than or equal to the allowable petroleum vapor pressure.

278. For example, on information and belief, Magellan's systems include automated equipment, such as processors for calculating an amount of butane to inject into the gasoline and for providing a control signal to a PLC, and PLCs for adjusting the injector valve based on the signal. *See, supra*, Facts Common to Each Claim for Relief, § B. More specifically, additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's systems include processors. *See, e.g.*, MAG-SUN_00003363; MAG-SUN_00010754-11158.

279. The Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data,

and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8.” **Exhibit 7** at 8:25-45.

280. Accordingly, Magellan’s butane blending methods satisfy limitations (d) and (e).

281. **Claim 16, Limitation (f)**. Claim 16 further recites “measuring vapor pressure of the blended petroleum stream.”

282. Magellan’s butane blending methods include measuring vapor pressure of the blended petroleum stream.

283. For example, on information and belief, Magellan’s systems include automated equipment, such as on-line analyzers for measuring the vapor pressure of gasoline and transmitting the vapor pressure to a processor. *See, supra*, Facts Common to Each Claim for Relief, § B. More specifically, additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan’s systems include online analyzers. *See, e.g.*, MAG-SUN_00003361; MAG-SUN_00010754-11158.

284. Further, the Magellan patent provides that “[b]y way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . an online sampler and RVP analyzer 14 which automatically samples and determines the RVP of the gasoline/butane blend in the gasoline line 4 at a point downstream of the butane injection point 5 and downstream of the mixer 12; . . . and a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14”

Exhibit 7 at 8:25-45.

285. Accordingly, Magellan’s butane blending methods satisfy limitation (f).

286. On information and belief, Magellan will infringe one or more claims of the '548 patent unless enjoined by this Court.

287. Magellan has had knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

288. Magellan has had knowledge, or should have had knowledge, of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the following patents in the '302 patent family are cited on the face of the Magellan patent: the '302 patent; the '629 patent; the '671 patent; and U.S. Patent Publication No. 2010/0084047 A1 (now the '951 patent). **Exhibit 7**, References Cited.

289. Magellan has had further knowledge of the earlier-issued '671 patent since at least 2014 when the Examiner rejected various claims of the Magellan patent as anticipated and/or rendered obvious by the '671 patent (U.S. Patent Publication No. 2006/0278304 A1).

290. Magellan has had further knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

291. The '686 patent is part of the same patent family as the '302, '629, '671, and '951 patents. The '686 patent shares an identical specification with the '671 patent. Like the '302, '629, and '671 patents, the '686 patent claims its earliest priority date to Provisional Application No. 60/267,844, filed February 9, 2001.

292. On information and belief, Magellan has been on notice of the claims of the '686 patent since they first published as U.S. Patent Publication No. 2012/0203038 on August 9, 2012,

and has had knowledge of the '686 patent since its date of issuance on December 8, 2015, or at least as of the date of the First Amended Complaint (August 2, 2018).

293. Despite this knowledge, Magellan continued to make, use, sell and/or offer to sell gasoline blended with butane and/or systems or methods for the blending of butane and gasoline. On information and belief, Magellan knew or should have known (and currently knows or should know) that its actions constitute infringement of the '686 patent, and has had such knowledge since at least 2015. As a result, Magellan's infringement of the '686 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants' conduct amounts to willful infringement. *See, e.g.,* MAG-SUN_00003542.

294. As a result of Magellan's infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

295. On information and belief, the conduct of Magellan presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

COUNT IV
INFRINGEMENT OF U.S. PATENT NO. 6,679,302
(Magellan's Blending Systems)

296. Sunoco re-alleges and incorporates herein by reference the allegations in each of the preceding paragraphs as if fully set forth herein.

297. On January 20, 2004, U.S. Patent No. 6,679,302 ("the '302 patent") was duly and legally issued by the U.S. Patent and Trademark Office ("PTO") to Mattingly et al. for an invention relating to a "Method And System For Blending Gasoline And Butane At The Point Of

Distribution.” A true and correct copy of the ’302 patent is attached hereto as **Exhibit 16**. The ’302 patent is presumed valid pursuant to 35 U.S.C. § 282.

298. Mattingly et al. assigned all right, title and interest in the ’302 patent to MCE Blending, LLC. MCE Blending, LLC subsequently assigned all right, title and interest in the ’302 patent to Sunoco Partners Butane Blending LLC. Thereafter, Sunoco Partners Butane Blending LLC assigned all right, title and interest in the ’302 patent to Plaintiff Sunoco Partners Marketing & Terminals L.P.

A. Powder Springs System

299. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Defendants are infringing one or more claims of the ’302 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline.

300. **Claim 27, Preamble.** The preamble of claim 27 recites “[a] method for blending butane and gasoline using a processor.”

301. Defendants have made, used, and/or are using systems and methods for blending butane and gasoline using a processor.

302. Accordingly, Defendants’ butane blending methods satisfy the preamble.

303. **Claim 27, Limitation (a).** Claim 27 further recites “receiving a gasoline volatility measurement at the processor.”

304. Defendants’ butane blending methods include receiving a gasoline volatility measurement at the processor. *See, supra*, Count II, Powder Springs System, ’548 Patent, Claim 1, Limitation (b).

305. Accordingly, Defendants’ blending systems satisfy limitation (a).

306. **Claim 27, Limitation (b)**. Claim 27 further recites “receiving a butane volatility measurement at the processor.”

307. On information and belief, Defendants’ butane blending methods include receiving a butane volatility measurement at the processor.

308. For example, Magellan’s employee Nicholas Huff stated in his declaration: “PSL does not blend butane into all fungible batches of gasoline that pass through the Colonial pipeline at Atlanta Junction. Rather, it blends only for those batches that have margin to blend butane and in situations where gasoline has been pre-sold to a Colonial shipper. Also, PSL does not blend into all grades of gasoline that travel through Atlanta Junction. . . . The downstream customers then have the option of further blending butane to the maximum RVP allowed by EPA and their own state and local regulations (which may be higher than the maximum permitted for the applicable grade of gasoline on the Colonial pipeline system).” D.I. 34 at ¶¶ 8-9.

309. Similarly, in Defendants’ Answering Brief in Opposition to Sunoco’s Motion for a Preliminary Injunction, Defendants stated: “The reality is that not every batch of gasoline on Colonial’s pipeline is blended at PSL and those that are blended are blended to an RVP target below the maximum, which would allow downstream operations to continue to blend.” D.I. 21 at 16–17.

310. Further, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation, Colonial stated that “[t]he injection of butane by the Joint Venture into fungible batches flowing through the pipeline is calibrated so that the product remains within the applicable product specification.” **Exhibit 1** at 18, ¶ 25. One of the specifications for which the system is “calibrated” is the vapor pressure of the gasoline, such that the allowable vapor pressure of gasoline is not exceeded. For example, in Colonial’s Answer and Affirmative Defenses in the *GEW* litigation,

Colonial explained that the various grades of gasoline in its pipeline must meet certain specifications, and that “[t]hese specifications include acceptable ranges for various chemical attributes of the product, such as octane rating and measures of volatility, including Reid Vapor Pressure (‘RVP’) and vapor-to-liquid ratio. Accordingly, one shipper’s product within a given product specification may have, *e.g.*, a slighter higher or lower RVP compared with another shipper’s product, while both shipper’s products may still meet the same product specification, *e.g.*, A1 gasoline.” *Id.* at 12-13, ¶ 6.

311. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants’ butane blending methods include receiving a butane volatility measurement at the processor. *See, e.g.*, MAG-SUN_00000018 at 20–23, 26–27.

312. Accordingly, Defendants’ blending systems satisfy limitation (b).

313. **Claim 27, Limitation (c).** Claim 27 further recites “receiving a target gasoline volatility value at the processor.”

314. Defendants’ butane blending methods include receiving a target gasoline volatility value at the processor. *See, supra*, Count I, Powder Springs System, ’948 Patent, Claim 7, Limitation (e); Count III, Powder Springs System, ’686 Patent, Claim 16, Limitation (c).

315. Accordingly, Defendants’ blending systems satisfy limitation (c).

316. **Claim 27, Limitation (d).** Claim 27 further recites “calculating a butane blend rate from the gasoline volatility measurement, the butane volatility measurement, and the target gasoline volatility value.”

317. On information and belief, Defendants' butane blending methods include calculating a butane blend rate from the gasoline volatility measurement, the butane volatility measurement, and the target gasoline volatility value.

318. Defendants' butane blending methods include receiving a target gasoline volatility value at the processor. *See, supra*, Count III, Powder Springs System, '686 Patent, Claim 16, Limitations (d)-(e).

319. Accordingly, Defendants' blending systems satisfy limitation (d).

320. On information and belief, Defendants will infringe one or more claims of the '302 patent unless enjoined by this Court.

321. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge of the earlier-issued the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

322. Magellan and Powder Springs, through joint venturer Magellan, have had knowledge, or should have had knowledge, of the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the following patents in the '302 patent family are cited on the face of the Magellan patent: the '302 patent; the '629 patent; the '671 patent; and U.S. Patent Publication No. 2010/0084047 A1 (now the '951 patent). **Exhibit 7**, References Cited.

323. Magellan and Powder Springs, through joint venturer Magellan, have had further knowledge of the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

324. Powder Springs, through joint venturer Colonial, has had knowledge, or should have had knowledge, of Sunoco's butane blending patents and Sunoco's patented systems and methods, and commercial embodiments thereof, since at least its formation in 2014. Such knowledge was obtained during or in relation to various presentations given by Sunoco to Colonial in 2013 regarding the licensing of Sunoco's patented blending systems.

325. On information and belief, Defendants had knowledge of the '302 patent since its date of issuance on January 20, 2004, or at least as of the date of the First Amended Complaint (August 2, 2018).

326. Despite this knowledge, Defendants continued to make, use, sell and/or offer to sell gasoline blended with butane and/or systems or methods for the blending of butane and gasoline. On information and belief, Defendants knew or should have known (and currently know or should know) that their actions constitute infringement of the '302 patent, and have had such knowledge since at least 2017 when Defendants' infringement began. As a result, Defendants' infringement of the '302 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Defendants' conduct amounts to willful infringement. *See, e.g.*, MAG-SUN_00003542.

327. As a result of Defendants' infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

328. On information and belief, the conduct of Defendants presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

B. Magellan's Blending Systems

329. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Magellan is infringing one or more claims of the '302 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline, including with Magellan's Blending Systems (*see, supra*, Facts Common to Each Claim for Relief, § B).

330. **Claim 1, Preamble.** The preamble of claim 1 recites "[a] system for blending gasoline and butane at a tank farm."

331. Magellan has been and/or still is utilizing systems for blending gasoline and butane at its terminals. *See, supra*, Facts Common to Each Claim for Relief, § B.

332. Accordingly, Magellan's butane blending systems satisfy the preamble of claim 1.

333. **Claim 1, Limitation (a).** Claim 1 further recites "a tank of gasoline."

334. Magellan's butane blending systems include a tank of gasoline.

335. For example, on information and belief, some of the gasoline tanks at the East Houston Terminal are located in the following image:

**Exhibit 14.**

336. Further, the RMP for the Chattanooga II Terminal states: “The Chattanooga II Terminal is an independent refined products inland terminal owned by Magellan Terminal Holdings, L.P. The facility is located in Chattanooga, TN and stores and distributes petroleum products such as gasoline and diesel. In addition to petroleum storage, Magellan stores butane onsite for blending into gasoline” **Exhibit 11**; *see also* **Exhibit 10** (RMP for East Houston Terminal: “The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40 CFR 68 regulated substance at this facility is butane. Butane is

stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping, storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the system is 9,526,126 lbs of butane.”); **Exhibit 12** (RMP for Greensboro II Terminal: “The Greensboro II Terminal is an independent refined products inland terminal owned by Magellan Terminal Holdings, L.P. The facility is located in Greensboro, NC and stores and distributes petroleum products such as gasoline and diesel. In addition to petroleum storage, Magellan stores butane onsite for blending into gasoline . . .”).

337. Accordingly, Magellan’s butane blending systems satisfy limitation (a) of claim 1.

338. **Claim 1, Limitation (b)**. Claim 1 further recites “a tank of butane.”

339. Magellan’s butane blending systems include a tank of butane. *See, supra*, Count I, Magellan’s Blending Systems, ’948 Patent, Claim 7, Limitation (a).

340. Accordingly, Magellan’s butane blending systems satisfy limitation (b) of claim 1.

341. **Claim 1, Limitation (c)**. Claim 1 further recites “a blending unit, at the tank farm, downstream of and in fluid connection with the tank of gasoline and the tank of butane.”

342. On information and belief, Magellan’s butane blending systems include a blending unit, at the tank farm, downstream of and in fluid connection with the tank of gasoline and the tank of butane.

343. For example, the RMP for the East Houston Terminal states: “The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40 CFR 68 regulated substance at this facility is butane. Butane is stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping, storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the

system is 9,526,126 lbs of butane.” **Exhibit 10**; *see also* **Exhibit 11** (RMP for Chattanooga II Terminal); **Exhibit 12** (RMP for Greensboro II Terminal).

344. In addition, on information and belief, Magellan’s systems include automated equipment, such as processors, PLCs, and control valves which can determine and control the blending of butane into gasoline. *See, supra*, Facts Common to Each Claim for Relief, § B.

345. Further, the Magellan patent provides: “By way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10; a static mixer or other mixer 12 installed in the gasoline line 4 downstream of the butane injection point 5 for mixing the butane with the gasoline stream; . . . a flow control valve 16 or other controller (e.g., a variable frequency drive) provided in the butane injection line 10; and a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8.” **Exhibit 7** at 8:25-45.

346. On information and belief, at the East Houston Terminal, the blending unit is located along the butane injection lines (blue), downstream of and in fluid connection with the tanks of gasoline and butane, as shown in the following image:

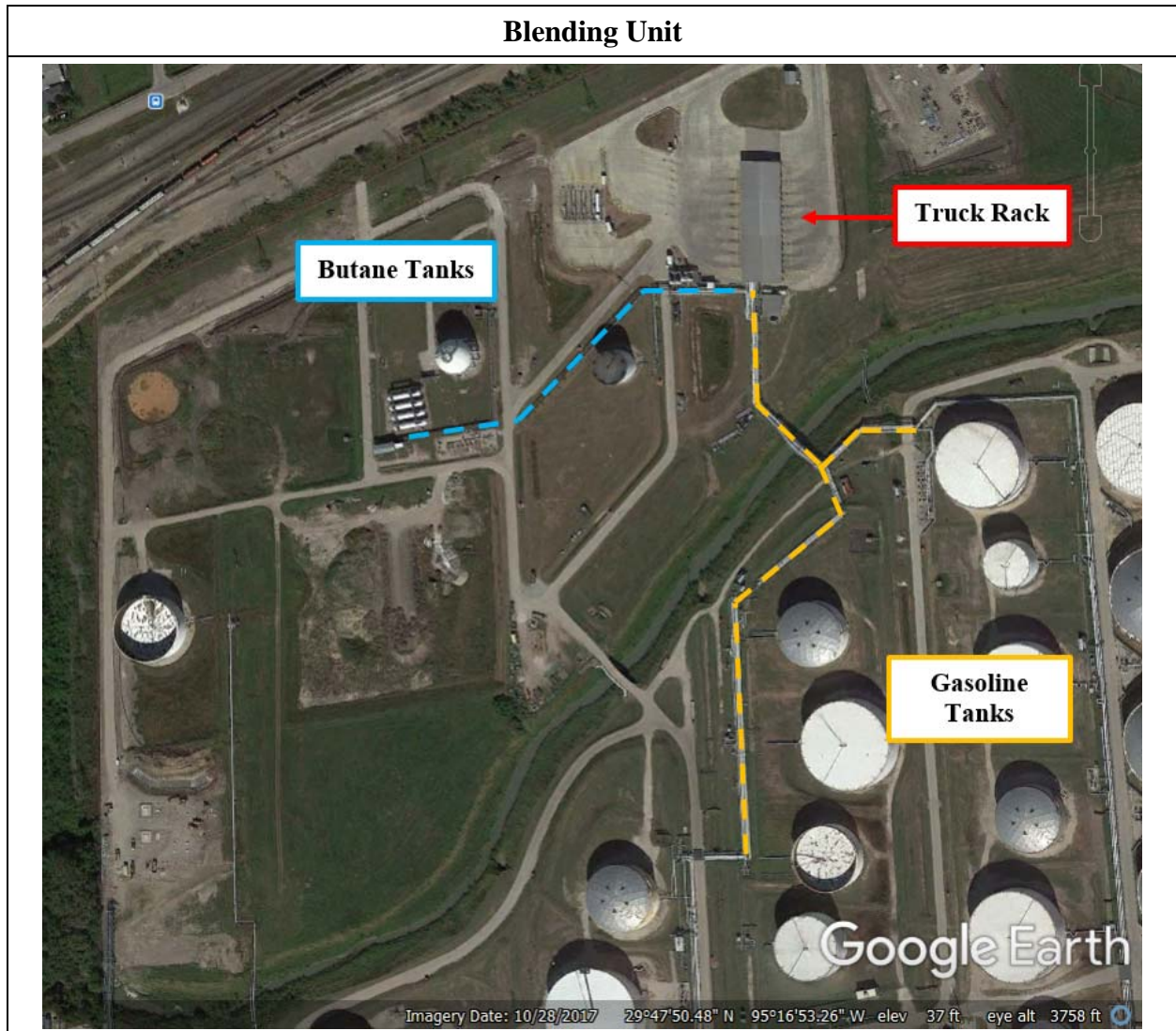


Exhibit 14.

347. Accordingly, on information and belief, Magellan’s butane blending systems satisfy limitation (c) of claim 1.

348. **Claim 1, Limitations (d)–(e).** Claim 1 further recites “a dispensing unit downstream of and in fluid connection with the blending unit; and a rack, wherein the dispensing unit is located at the rack and is adapted to dispense gasoline to gasoline transport vehicles.”

349. Magellan's butane blending systems include a dispensing unit that is located at a rack, adapted to dispense gasoline to gasoline transport, and on information and belief, downstream of and in fluid connection with the blending unit.

350. For example, the RMP for the East Houston Terminal states: "The East Houston Facility is a butane storage and blending facility. The facility is located in Houston, TX. The 40 CFR 68 regulated substance at this facility is butane. Butane is stored onsite at a quantity greater than 10,000 lbs for blending into gasoline. The equipment which handles butane includes piping, storage - (4) butane bullets, and (1) butane sphere, and pumps. The maximum inventory for the system is 9,526,126 lbs of butane." **Exhibit 10**; *see also* **Exhibit 11** (RMP for Chattanooga II Terminal: "The Chattanooga II Terminal is an independent refined products inland terminal owned by Magellan Terminal Holdings, L.P. The facility is located in Chattanooga, TN and stores and distributes petroleum products such as gasoline and diesel. In addition to petroleum storage, Magellan stores butane onsite for blending into gasoline . . ."); **Exhibit 12** (RMP for Greensboro II Terminal: "The Greensboro II Terminal is an independent refined products inland terminal owned by Magellan Terminal Holdings, L.P. The facility is located in Greensboro, NC and stores and distributes petroleum products such as gasoline and diesel. In addition to petroleum storage, Magellan stores butane onsite for blending into gasoline . . .").

351. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's butane blending systems include a dispensing unit that is located at a rack, adapted to dispense gasoline to gasoline transport, and downstream of and in fluid connection with the blending unit. *See, e.g.*, MAG-SUN_00003227 at 3244; MAG-SUN_00003225; MAG-SUN_00003348 at 3353; MAG-SUN_00010754-11158.

352. On information and belief, the truck rack with the dispensing unit is shown in the following image:

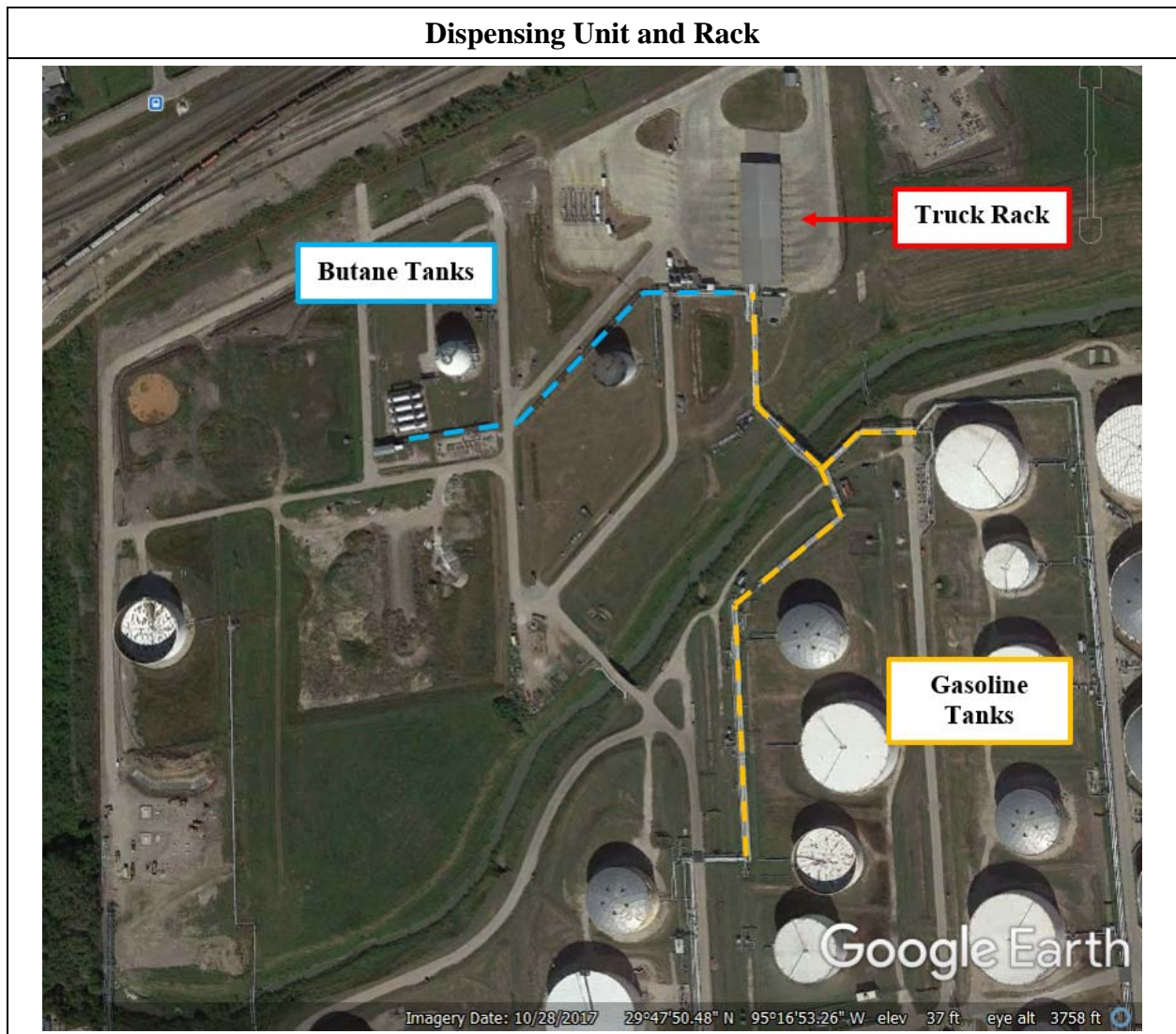


Exhibit 14.

353. Accordingly, on information and belief, Magellan's butane blending systems satisfy limitations (d) and (e) of claim 1.

354. **Claim 2.** Furthermore, claim 2 of the '302 patent recites: "The system of claim 1 further comprising a process control unit, wherein the process control unit generates a ratio input signal that controls the ratio of butane and gasoline blended by the blending unit."

355. Magellan's butane blending systems include, on information and belief, a process control unit that generates a ratio input signal that controls the ratio of butane and gasoline blended by the blending unit.

356. For example, on information and belief, Magellan's systems include automated equipment, such as processors, PLCs, and/or process control units that generate a ratio input signal that controls the ratio of butane and gasoline blended by the blending unit. *See, supra*, Facts Common to Each Claim for Relief, § B.

357. Further, the Magellan patent provides: "By way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10; a static mixer or other mixer 12 installed in the gasoline line 4 downstream of the butane injection point 5 for mixing the butane with the gasoline stream; . . . a flow control valve 16 or other controller (e.g., a variable frequency drive) provided in the butane injection line 10; and a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8." **Exhibit 7** at 8:25-45.

358. Accordingly, on information and belief, Magellan's butane blending systems satisfy claim 2.

359. **Claim 3**. Furthermore, claim 3 of the '302 patent recites: "The system of claim 2 wherein the ratio input signal is derived from a calculation of the ratio of butane and gasoline that will yield a desired vapor pressure."

360. Magellan's butane blending systems include, on information and belief, a process control unit that generates a ratio input signal derived from a calculation of the ratio of butane and gasoline that will yield a desired vapor pressure.

361. For example, on information and belief, Magellan's systems include automated equipment, such as processors, PLCs, and/or process control units that generate a ratio input signal derived from a calculation of the ratio of butane and gasoline that will yield a desired vapor pressure. *See, supra*, Facts Common to Each Claim for Relief, § B.

362. Further, the Magellan patent provides: "By way of example, in terms of blending butane with gasoline, the inventive blending system 2 preferably comprises: . . . one or more butane injection pump(s) 8 which deliver butane from the tank(s) 6 to the gasoline line 4 via a butane injection line 10; a static mixer or other mixer 12 installed in the gasoline line 4 downstream of the butane injection point 5 for mixing the butane with the gasoline stream; . . . a flow control valve 16 or other controller (e.g., a variable frequency drive) provided in the butane injection line 10; and a programmable logic controller (PLC) or other automated controller 18 which receives the RVP data from the downstream analyzer 14, determines an appropriate butane blend ratio based upon the RVP data, and implements the calculated blending ratio by automatically operating the butane control valve 16 and/or the butane pump 8." **Exhibit 7** at 8:25-45.

363. Accordingly, on information and belief, Magellan's butane blending systems satisfy claim 3.

364. On information and belief, Magellan will infringe one or more claims of the '302 patent unless enjoined by this Court.

365. Magellan has had knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

366. Magellan has had knowledge, or should have had knowledge, of the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least 2013. For example, the '302 patent (as well as other related patents) are cited on the face of the Magellan patent. **Exhibit 7**, References Cited.

367. Magellan has had further knowledge of the '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

368. On information and belief, Magellan had knowledge of the '302 patent since its date of issuance on January 20, 2004, or at least as of the date of the First Amended Complaint (August 2, 2018).

369. Despite this knowledge, Magellan continued to make, use, sell and/or offer to sell gasoline blended with butane and/or systems or methods for the blending of butane and gasoline. On information and belief, Magellan knew or should have known (and currently knows or should know) that its actions constitute infringement of the '302 patent, and has had such knowledge since at least 2011. As a result, Magellan's infringement of the '302 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's conduct amounts to willful infringement. *See, e.g.,* MAG-SUN_00003542.

370. As a result of Magellan's infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

371. On information and belief, the conduct of Magellan presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

COUNT V
INFRINGEMENT OF U.S. PATENT NO. 7,032,629
(Magellan's Blending Systems)

372. Sunoco re-alleges and incorporates herein by reference the allegations in each of the preceding paragraphs as if fully set forth herein.

373. On April 25, 2006, U.S. Patent No. 7,032,629 ("the '629 patent") was duly and legally issued by the U.S. Patent and Trademark Office ("PTO") to Mattingly et al. for an invention relating to a "Method And System For Blending Gasoline And Butane At The Point Of Distribution." A true and correct copy of the '629 patent is attached hereto as **Exhibit 17**. The '629 patent is presumed valid pursuant to 35 U.S.C. § 282.

374. Mattingly et al. assigned all right, title and interest in the '629 patent to MCE Blending, LLC. MCE Blending, LLC subsequently assigned all right, title and interest in the '629 patent to Sunoco Partners Butane Blending LLC. Thereafter, Sunoco Partners Butane Blending LLC assigned all right, title and interest in the '629 patent to Plaintiff Sunoco Partners Marketing & Terminals L.P.

375. In violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, Magellan is infringing one or more claims of the '302 patent by making, using, selling and/or offering to sell, without authority, the claimed systems for the blending of butane and gasoline, and/or by performing the claimed methods for the blending of butane and gasoline, including with Magellan's Blending Systems (*see, supra*, Facts Common to Each Claim for Relief, § B).

376. **Claim 31, Preamble.** The preamble of claim 31 recites “[a] computer-implemented method for blending a butane stream and a gasoline stream.”

377. On information and belief, Magellan has been and/or still is utilizing a computer-implemented method for blending a butane stream and a gasoline stream.

378. For example, on information and belief, Magellan’s systems include automated equipment, such as processors, PLCs, and computers. *See, supra*, Facts Common to Each Claim for Relief, § B.

379. Accordingly, on information and belief, Magellan’s butane blending systems satisfy the preamble of claim 31.

380. **Claim 31, Limitation (a).** Claim 31 further recites “receiving a first measurement indicating a vapor pressure of the gasoline stream.”

381. On information and belief, Magellan’s computer-implemented method includes receiving a first measurement indicating a vapor pressure of the gasoline stream.

382. For example, on information and belief, Magellan’s systems include automated equipment, such as on-line vapor pressure analyzers, PLCs, processors, and computers, which measure and receive the vapor pressure of the gasoline. *See, supra*, Facts Common to Each Claim for Relief, § B.

383. Further, the Magellan patent provides: “When each new batch of gasoline or other fuel stock arrives through the line 4, the PLC 18 preferably begins an appropriate delay (typically about five (5) minutes) to ensure that the batch interface has passed the sample inlet of the online analyzer 14. The delay in initiating testing by the online analyzer 14 between succeeding batches ensures that accurate data is obtained and transmitted to the blending system. One benefit is that the sampling delay reduces contamination between gasoline batches and decreases the time

required for the online analyzer 14 to return an accurate analysis. This also allows the operator to maximize the amount of butane blended into each batch of gasoline. . . . The innovative system and process can also be operated to begin blending even before any data regarding the current batch of gasoline or other fuel stock has been transmitted to the PLC 18 by the online analyzer 14. For example, for any given batch for which blending is permitted and it is also known that at least some available RVP margin exists, an initial safe blending default ratio (e.g., 0.25%) could be entered or otherwise activated. Alternatively, as another example, an operator can enter a predetermined blending value for the batch.” **Exhibit 7** at 12:54-13:34.

384. Accordingly, on information and belief, Magellan’s butane blending systems satisfy limitation (a) of claim 31.

385. **Claim 31, Limitation (b)**. Claim 31 further recites “calculating a blend rate at which the butane stream can be blended with the gasoline stream.”

386. On information and belief, Magellan’s computer-implemented method includes calculating a blend rate at which the butane stream can be blended with the gasoline stream.

387. For example, on information and belief, Magellan’s systems include automated equipment, such as PLCs, processors, and computers, which calculate a blend rate at which the butane stream can be blended with the gasoline stream. *See, supra*, Facts Common to Each Claim for Relief, § B.

388. Further, the Magellan patent provides: “At the end of the interface delay, the PLC 18 commands the online analyzer 14 to begin sampling and testing. Based upon the test results and the blending target for the batch in question, the PLC 18 calculates an appropriate blend ratio.” **Exhibit 7** at 13:35-38.

389. Accordingly, on information and belief, Magellan's butane blending systems satisfy limitation (b) of claim 31.

390. **Claim 31, Limitation (c).** Claim 31 further recites "transmitting an instruction to a programmable logic controller for adjusting the butane stream to the calculated blend rate for blending with the gasoline stream and distributing at a rack."

391. On information and belief, Magellan's computer-implemented method includes transmitting an instruction to a PLC for adjusting the butane stream to the calculated blend rate for blending with the gasoline stream and distributing at a rack.

392. For example, on information and belief, Magellan's systems include automated equipment, such as PLCs, processor, and computers, which transmit an instruction to a PLC for adjusting the butane stream to the calculated blend rate. *See, supra*, Facts Common to Each Claim for Relief, § B.

393. Further, on information and belief, Magellan's computer-implemented method includes distributing the gasoline at a rack. *See, supra*, Count IV, '302 Patent, Claim 1, Limitations (d)–(e).

394. Further, the Magellan patent provides: "Given the continuing information provided by the online analyzer 14 regarding the actual RVP or other volatility parameter of the blend, the PLC 18 continuously operates (preferably using a proportional-integral-derivative control loop) to adjust the butane or other injection rate as necessary to achieve and maintain the targeted blend volatility (e.g., RVP) for the batch in question." **Exhibit 7** at 14:22-28.

395. Accordingly, on information and belief, Magellan's butane blending systems satisfy limitation (c) of claim 31.

396. **Claim 31, Limitation (d).** Claim 31 further recites “receiving a second measurement indicating a vapor pressure of the blended gasoline stream and butane stream.”

397. On information and belief, Magellan’s computer-implemented method includes receiving a second measurement indicating a vapor pressure of the blended gasoline stream and butane stream.

398. For example, on information and belief, Magellan’s systems include automated equipment, such as on-line vapor pressure analyzers, PLCs, processors, and computers, which measure and receive the vapor pressure of the blended gasoline. *See, supra*, Facts Common to Each Claim for Relief, § B.

399. Further, the Magellan patent provides: “Given the continuing information provided by the online analyzer 14 regarding the actual RVP or other volatility parameter of the blend, the PLC 18 continuously operates (preferably using a proportional-integral-derivative control loop) to adjust the butane or other injection rate as necessary to achieve and maintain the targeted blend volatility (e.g., RVP) for the batch in question.” **Exhibit 7** at 14:22-28.

400. Accordingly, on information and belief, Magellan’s butane blending systems satisfy limitation (d) of claim 31.

401. On information and belief, Magellan will infringe one or more claims of the ’629 patent unless enjoined by this Court.

402. Magellan has had knowledge of the earlier-issued ’302 patent and the ’302 patent family, and commercial embodiments thereof, since at least 2006 or 2007. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

403. Magellan has had knowledge, or should have had knowledge, of the earlier-issued '629 patent, and commercial embodiments thereof, since at least 2013. For example, the '629 patent is cited on the face of the Magellan patent. **Exhibit 7**, References Cited.

404. Magellan has had further knowledge of the later-issued '671 patent, which claims priority to the '629 patent, since at least 2014 when the Examiner rejected various claims of the Magellan patent as anticipated and/or rendered obvious by the '671 patent (U.S. Patent Publication No. 2006/0278304 A1).

405. Magellan has had further knowledge of the earlier-issued '302 patent and the '302 patent family, and commercial embodiments thereof, since at least May 2015. Such knowledge was obtained through commercial dealings between Sunoco and Magellan.

406. On information and belief, Magellan has had knowledge of the '629 patent since its date of issuance on April 25, 2006, or at least as of the date of the First Amended Complaint (August 2, 2018).

407. Despite this knowledge, Magellan continued to make, use, sell and/or offer to sell gasoline blended with butane and/or systems or methods for the blending of butane and gasoline. On information and belief, Magellan knew or should have known (and currently knows or should know) that its actions constitute infringement of the '629 patent, and has had such knowledge since at least 2011. As a result, Magellan's infringement of the '629 patent has been, and continues to be, willful and deliberate. Additional documents have been produced in this litigation, with confidentiality restrictions in accordance with the Protective Order (D.I. 93), which provide further support that Magellan's conduct amounts to willful infringement. *See, e.g.,* MAG-SUN_00003542.

408. As a result of Magellan's infringement, Sunoco has suffered and will continue to suffer damages in an amount to be proven at trial and irreparable harm.

409. On information and belief, the conduct of Magellan presents an exceptional case such that Sunoco is entitled to an award of its reasonable attorneys' fees, as provided by 35 U.S.C. § 285.

PRAYER FOR RELIEF

410. WHEREFORE, Sunoco prays for judgment and seeks relief against Defendants Powder Springs and Magellan as follows:

- (a) For a judgment that one or more claims of the '948, '548, and '686 patents have been and continue to be infringed by Defendant Powder Springs;
- (b) For a judgment that Defendant Powder Springs' infringement of the '948, '548, and '686 patents has been willful;
- (c) For a judgment that one or more claims of the '948, '548, '686, '302, and '629 patents have been and continue to be infringed by Defendant Magellan;
- (d) For a judgment that Defendant Magellan's infringement of the '948, '548, '686, '302, and '629 patents has been willful;
- (e) For a judgment and an award of all damages sustained by Sunoco as the result of Defendants' acts of infringement, including supplemental damages for any continuing post-verdict infringement up until entry of the final judgment with an accounting as needed;
- (f) For a permanent injunction enjoining Defendant Powder Springs from infringing one or more claims of the '948, '548, and '686 patents;
- (g) For a permanent injunction enjoining Defendant Magellan from infringing one or more claims of the '948, '548, '686, '302, and '629 patents;

- (h) For a judgment and an award of enhanced damages pursuant to 35 U.S.C. § 284;
- (i) For a judgment and an award of attorneys' fees pursuant to 35 U.S.C. § 285 or as otherwise permitted by law;
- (j) For a judgment and an award of all interest and costs; and
- (k) For a judgment and an award of such other and further relief as the Court may deem just and proper.

JURY DEMAND

In accordance with Fed. R. Civ. P. 38 and 39, Sunoco asserts its rights under the Seventh Amendment to the United States Constitution and demands a trial by jury on all issues that may be so tried.

Dated: October 9, 2018

PHILLIPS, GOLDMAN, MCLAUGHLIN &
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